DOCUMENT RESUME

ED 441 387 HE 032 865

TITLE	Higher Education in Transition Economies in Asia. Proceedings of the First Workshop on Strategies and Policies in Higher Education Reform in Transition Economies in Asia (Xi'an, China, October 7-10, 1997).
INSTITUTION	United Nations Educational, Scientific and Cultural Organization, Bangkok (Thailand). Principal Regional Office for Asia and the Pacific.
PUB DATE	1998-00-00
NOTE	227p.
AVAILABLE FROM	UNESCO Principal Regional Office for Asia and the Pacific, P.O. Box 967, Prakanong Post Office, Bangkok 10110, Thailand.
PUB TYPE	Collected Works - Proceedings (021)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Developing Nations; Economic Change; *Economic Development; Educational Change; Educational Economics; *Educational Finance; Foreign Countries; *Free Enterprise System; Government Role; *Higher Education; Politics of Education; Socialism
IDENTIFIERS	*Asia; UNESCO

ABSTRACT

These proceedings present papers from a workshop for policymakers from member states of the United Nations Educational, Scientific and Cultural Organization (UNESCO) that focused on higher education in transitional economies. After a brief overview of the workshop and the participating countries, reports are presented on Cambodia, China, Kyrgyzstan, Lao PDR, Mongolia, Myanmar, the Russian Federation, and Viet Nam. The papers are preceded by a keynote speech, "Challenges and Strategies for Chinese Universities in the Transition from Planned Economy to Socialist Market Economy in the Information Age" (Min Weifang). Titles of the seven paper presented are: (1) "The Operational Mechanism of Higher Education in the Western Market Economies and Its Use for Reference in Higher Education Reform in Transition towards Market Economies in Asia" (Wang Yibing); (2) "Some Features of Higher Education in the Market Economies: The Case of SEAMEO Member Countries" (Tong-In Wongsothorn); (3) "Market Economy and Higher Education Development: The Case of Malaysia" (Anuwar Ali); (4) "Changing Policies and Strategies in Higher Education in South Asia" (Jandhyala B.G. Tilak); (5) "The Government's Policy and a College's Income Generation" (Yang Chunde, Zhang Jianshen, Wu Keqiang, and Liang Keyin); (6) "Analysis on the Source of Fund for Higher Education Institutions in the Socialist Market Economy" (Li Jine, Qian Mengyong, and Zhu Zhen); and (7) "Higher Education Reform in Economic Transition: The Case of Shenzen University" (Yang Yiyi and Liu Yi). Two appendixes present a list of participants and a workshop schedule. (SM)

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Proceedings of the First Workshop on Strategies and Policies in Higher Education Reform in Transition Economies in Asia

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Xi'an, China
7-10 October 1997

UNESCO PRINCIPAL REGIONAL OFFICE FOR ASIA AND THE PACIFIC
Bangkok, 1998

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UNESCO Principal Regional Office for Asia and the Pacific.
Higher education in transition economies in Asia; proceedings of the First Workshop on Strategies and Policies in Higher Education Reform in Transition Economies in Asia, Xi'an, China, 7-10 October 1997. Bangkok, UNESCO PROAP, 1998.
207 p.

1. HIGHER EDUCATION. 2. EDUCATIONAL POLICY.
3. EDUCATIONAL STRATEGIES. 4. EDUCATIONAL REFORM.
5. EDUCATIONAL DEVELOPMENT. 6. MARKET ECONOMY.
7. ASIA. I. Title.

378

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Published by the
UNESCO Principal Regional Office for Asia and the Pacific
P.O. Box 967, Prakanong Post Office
Bangkok 10110, Thailand

Printed in Thailand

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Preface

In the last two or three decades of the twentieth Century, dramatic and fundamental changes have been taken place and are still going on in human history. One of them has been a big number of countries claiming to be in transition from the centralized to market economies since late seventies or eighties. It is not a secret that, in the past, almost all of them adopted a socialist economic system with rigid central planning and higher education become part of it, in which there was no role to be played by the market. The transition realities have shown that it is a long, complicated and sometimes painful readjusting, restructuring and reforming process, which touch, upon not just parts but the whole operational mechanism of economies and higher education as well. The direction adopted towards a market economy naturally leads everybody to think about what the new structure and function of an operational mechanism of higher education under a market economy will and should be and what one can learn from countries which have been under market economies for decades or centuries. Ironically, when you turn to Western market economies, you find a similar question concerning the role of market in higher education or as Gareth Williams puts it, a phenomenon of "Marketization" of higher education, which has been raised and debated for some time there as well. Here some basic questions will arise:

- Does a market mechanism of higher education in the Western market economy exist? If not, what governs them?
- What is the role of market, the state and the society as a whole?
- What we should and can, and what we shouldn't and can't learn from it?

It is my belief that all questions raised here are fundamental for policy makers at all levels in guiding the transition process, a process unprecedented in man's history. It is against this background that UNESCO PROAP has taken the initiative in co-operation with the Chinese National Commission for UNESCO in organizing this workshop.

Therefore, the purpose of the workshop was to provide a forum for policy makers of UNESCO member states in transition with the following objectives:

- Theoretical thinking on and exploration of key dimensions of a proper operational mechanism of higher education to be established in the transition towards market economies based on comparative studies of those under Western market economies;

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- Exchange of experiences and review of the past practices in readjusting, restructuring and reforming higher education systems in transition economies in Asia since late 70s in order to strengthen capacity building in formulation of strategies and policies for the next century; and
- Finding a mechanism for continuation of such a forum after completion of the workshop due to the long, complicated, unprecedented and sometimes painful nature of the transition process.

We are happy to be able to organize this first workshop in the largest transition economy in the World, with its practice in the past two decades, regarded by the World Bank and IMF as a successful story. Sharing of experiences among all countries in this process will be undoubtedly helpful. We are also happy to have been able to invite five resource persons and experts in higher education from China as well as other countries in our region to participate in the workshop. Some of them come from market economies and three of them are not only important policy makers at different levels in higher education in their own countries and regions but are also economists. We have seen that the exchange of experiences from different national contexts and the dynamic interaction between all the participants produced fruitful outcomes at the four-day workshop.

The fact that it is only less than 3 years before we enter into the 21st Century and next Millennium and the rapid progress in science and technology remind us that the term "transition" may need to be understood in broad terms that we are being transformed towards not only market economies but also the 21st Century, the Third Millennium and an Information society. The rapidly coming information society absolutely requires a greater and creative role of higher education as the national think tank, major producer and pool of scientific and technological personnel, pursuer of truths and protector of cultures and traditions in helping the government and society as a whole to face these challenges ahead. Over time the wealth of nations and societies has been defined by national resources and industrial production capacity, factories, which lead to a strong economy and thus a decent standard of living for most. In the information society with which we are moving, the wealth of a nation will be defined by the educational level of its people. In this sense, transition towards the information society is the substance of the transition of higher education. The formulation of proper strategies and policies for higher education in the transition towards market economies aims to provide a sound and healthy environment to ensure the successful fulfillment of the mission of higher education. I believe this workshop serves as an important step in this direction.

Victor Ordoñez
Director

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Part I.

The Regional Workshop was of the first kind, held to assist streamline the strategies and policies in Higher Education Reforms to the transition to Market Economies of South East, East and Central Asian nations.

■ Venue and Time

It was held in Dynasty Hotel, Xi-an, Shaanxi Province of the People's Republic of China (PRC) from 7 to 10 October 1997. The organizers of this regional workshop were the UNESCO PROAP, Bangkok, The Chinese National Commission for UNESCO and Shaanxi Educational Commission, People's Republic of China.

■ Objectives

The purpose of the workshop is to provide a forum for policy makers of UNESCO member states in transition with the following objectives:

- Theoretical thinking on and exploration of key dimensions of a proper operational mechanism of higher education to be established in the transition towards Market economies based on comparative studies on that under Western market economies;
- Exchange of experiences of the past practices in readjusting, restructuring and reforming higher education systems in transition economies in Asia since late 70s and 80s in order to strengthen capacity building in formulation of strategies and policies for the next century; and
- Finding a mechanism for continuation of such a forum after completion of the workshop due to the long, complicated, unprecedented and sometimes painful nature of the transition process.

■ Participation

Eight countries in transition from Asia viz.: Cambodia, China(PRC), Kyrgyzstan, Lao PDR, Mongolia, Myanmar, Russia, and Viet Nam participated in the First Regional Workshop with resource persons from China, India, Malaysia and Thailand.

■ Election

The following persons were elected as Chairman, Vice Chairmen and Rapporteur after proper proposals and secondments unanimously by the delegates and those present at the workshop.

Chairman	Mr. Yu Fuzeng Assistant Minister of State Education Commission and Secretary General of the National Commission of UNESCO
Vice Chairmen	Prof. Dr. Anuwar Ali Director Department of Higher Education Ministry of Education, Malaysia
	Prof. Dr. Lam Quang Thiep Director, Higher Education Department Ministry of Education and Training Socialist Republic of Viet Nam
Rapporteur	Prof. U. Maw Than Rector, Institute of Economics Union of Myanmar

Part II. Proceedings

■ Opening of the Workshop

The Regional Workshop was opened with the addresses of Mr. Mu Linsheng, Vice President of the Provincial People's Congress, and Mr. Yu Fuzeng, Assistant Minister of the State Education Commission and Secretary General of the Chinese National Commission for UNESCO. The former underscored the increasing role of higher education in the economic and social development of nations and expressed the gratitude to UNESCO for the opportunity to hold the workshop in Shaanxi Province, in his address.

Mr. Yu Fuzeng, in his address, referred to the economic growths achieved in transition economies. He also pointed out the advances and strides made in the fields of science and technology. He then stated that countries in transition to market economies are faced with challenges in higher education and urged the participants to prepare for these challenges.

Prof. Wang Yibing of UNESCO PROAP, Bangkok also made a statement where he extended sincere congratulation on the opening of the workshop on behalf of Dr. Victor Ordoñez, Director of PROAP and outlined the objectives of the Workshop and raised some basic questions in relation to role of the market, state and society and lessons to be drawn from those issues and Western market economies.

The opening ceremony closed with photographs taken of the distinguished guests, delegates and sponsoring officials.

■ Morning Session

The session resumed with the election of Chair, two Vice-Chairs and Rapporteur, results of which have been mentioned in Part I. This was followed by a Keynote Address and a Country Report.

■ Keynote Address

Dr. Min Weifang, Executive vice-president of Beijing University delivered the Keynote Address: "Challenges and Strategies for Chinese Higher Education in the Process of Transition from the Centralized Planned Economy to the Socialist Market Economy". He dwelt on establishing new institutional frame work, diversification and multiplication of financial resources, integration of teaching, research and services in the role of universities and promotion of international co-operation among universities. It was a stimulating and fascinating presentation addressed to challenges shared by many delegates and gave insights to strategies.

■ Country Reports

China (PRC) – Mr. Zhu Chuanli, Deputy Director General, Department of Higher Education, State Education Commission, PRC presented "The Reform and Development of China's Higher Education". Mr. Zhu outlined the challenges and opportunities, strategies, conception and objectives of reforms for 1990's, 2000 and 2010 respectively in his country report. His presentation not only dealt with structural and pedagogic reforms but also with the long term vision for the 21st century. The morning session adjourned for lunch after the Country report from China (PRC).

■ Afternoon Session

Six countries submitted their Country Reports on the resumption of the Workshop after lunch. Questions were raised to the delegates presenting the country reports and responses and discussions ensured in each presentation.

Cambodia – Mr. Vann Moniroith Stated the main challenge faced by Cambodia in the transition is lack of qualified personnel, physical facilities, finance, autonomy, etc. He also spelled out the elements comprised in cost recovery in higher education. The progress of 3Rs-Rehabilitation, Reform and Restructuring-in implementation proposed by a

UNESCO team in 1994 was discussed. He stressed the importance of internationalization of higher education.

Lao PDR – Mr. Thammarath Nakhavith, Deputy Director General, Higher, Technical and Vocational Education Dept., MOE, identified the main issues as shortage of human resources, low quality of education, low external efficiency to reflect societal needs, low financing and managerial efficiency. He stated the establishment of National University – NUOL.

Mongolia – Mr. Sambun Altangerel, Director, Policy Implementation and co-ordination Department, Ministry of Science, Technology, Education & Culture stated the requisites of H.E. reforms as participation of private sector, independence and decentralization of institutions, changes in structure, sharing of costs by students, community participation, etc. Rapid growth of private colleges was observed and also responded to the question on state Loan Funds.

Myanmar – Prof. U Maw Than, Rector, Institute of Economics explained to the delegates about the growth of students, expansion and upgrading of institutes of higher learning, loss of academic staff to private sector, sex ratios among academic staff, students, ratio of teaching and admin. staff, need and opportunities in cost recoveries. He also presented about distance education and absence of private universities.

Kyrgyzstan – Mrs. L. Miroshnicherko, Director, Research Institute of High Education Problems, stated the main issues and strategies directed towards them. She dwelt on the transition to many leveled system, access to education, change in the finance system, development of private sector, democratization and non-centralized administration, academic freedom in higher education sector.

Russian Federation – Dr. Vladimir I. Kurilov, President of Far Eastern State University presented the Informatization of Russian Universities on the threshold of the 21st Century. He explained about the RUNNET (Russian Universities Network) within INTERNET. He implore universities in transition economies to be linked to RUNNET and thereby improve education, made available university education by distance learning. He clarified that the medium of communication would be a mix of Russian and English. Dr. V.I. Kurilov presented also in written form his second report about global problems on the threshold of the 21st Century.

Viet Nam – Prof. Dr. Lam Quang Thiep, Director, Higher Education Department, Ministry of Education and Training divided his country report into four sections: socio-economic context, current status, higher education reform since 1996, and international co-operation. He identified the weaknesses in competence of H.E. administration staff, student imbalance in different specialization, unequal access to higher education and

shortage of qualified teaching staff. He clarified about the autonomy and freedom given to universities among which could be found private ones.

Second day - 9 October 1997

The second day of the Workshop was divided into morning and afternoon sessions.

■ Morning Session

The session began at 8:30 a.m. and continued up to 12:30 to deliberate on the presentation of 5 theme papers. It was chaired by Prof. Dr. Anuwar Ali.

Prof. Wang Yibing, Programme Specialist in Higher Education, UNESCO PROAP, Bangkok presented Issues in "Evolution of Overall Operational Mechanism of Higher Education in the Transition from Centralized to Market Economies". He touched on very critical issues of the operational mechanism of Higher Education under the Western market economies and of the various models of 5 varied advanced economies from four aspects of roles of IHEs(Universities), State, Market and Society. He examined the strength and weaknesses of higher education operational mechanism under Western as well as transition economies. He also observed that with respect to role of IHES in the matter of academic freedom.

Prof. Tong-In Wongsothorn, Deputy Permanent Secretary, Ministry of University Affairs, Thailand and acting Director of SEAMEO RIHED, presented "Features of Market Economies and Models of Higher Education-Case of ASIAN Countries". Dr. Tong-In pointed out the activities of SEAMEO member countries. He explained about some salient features (1) Relevance (2) Privatization (3) Corporatization and (4) Internationalization.

Dr. Anuwar Ali, Director, Higher Education Department, Ministry of Education, Malaysia presented "Market Economy and Higher Education Development - Case of Malaysia", where in he discussed on the role of Government, relationship with private sector, concept of Malaysia Incorporated development Allocations for higher education, Supply of Qualified and Technical manpower and the concept of five years plans and mid-term reviews of five year plans. All these are related to the importance and role of higher education. He presented recent measures and strategies that have been implemented to reform higher education institutions in Malaysia including enactments in relation to setting up of private TV Universities.

Prof. Dr. Jandhyala B.G. Tilak, Senior Fellow and Head of the Education Finance Unit, National Institute of Educational Planning and Administration, New Delhi, India presented his theme of Evolution. Systems and Development of Higher Education – Case of South Asia. He presented the growing external debts and deficits of countries in the region and also about the state of H.E. by exhibits of quantitative indicators. He concluded with the emerging trends towards privatization in the H.E. sector with precautions to be taken in such moves.

Mr. Wan Chinned, Vice President of North-West University, Xi-an, China, pointed out problems, suggestions in the financing of IHL (Institute of Higher Learning) in his paper titled challenges Facing University Management in Transition Toward the Socialist Market Economy – Case of North West University.

■ Afternoon Session

Three theme papers were delivered in this session. Mrs. Li Jinge, Senior Chartered Accountant, presented "Challenges Facing University Finance in Transition toward the socialist Market Economy – Case of Xian Jiaotong University". She discussed about the allocation model of financing among students, Government and University services and the opportunities along with some problems and issues in financial management arena.

Prof. Yang Yiyi, Director, Higher Education Research Institute, Shenzen University, PRC, presented "High Education Reform in Economic Transition – Case of Shenzen University". He gave a short history of Shenzen University and proceeded with the efforts towards reforms in line with special economic zone activities and concluded with five suggestions for smooth transition and adaptation.

Prof. Dr. Wang Yibing, UNESCO PROAP, concluded the presentation of the themes of the "First Regional Workshop with excellent articulation on Internationalization of Higher Education in the region and the role of UNESCO and International Agencies". He mentioned the prerequisites, for effective internationalization and link-up, the needs, benefits and the efforts of related Agencies with particular role played by UNESCO.

Part III.

■ Campus Study Tour

The participants have been arranged to a very useful and interesting campus study tour to two universities: North West University and Xi-an Jiaotong University on the first day and the last day. The former is a key university of Shaanxi Province. The latter is one of the thirty-five key universities in China under the direct control of the central government. Participants have been well received by the senior administrators of the two universities with detailed introduction about challenges facing and solutions to various problems in their transition toward socialist market economy.

All participants have been deeply impressed by the dynamism and creativity of the two universities in restructuring and reforming of the two universities to better serve the modernization of the country and to catch up the world standard of higher learning.

Participants expressed great interest in their efforts in multiplication and diversification of financial resources to overcome the fund shortage in expansion of enrollment and meeting various emerging needs of the universities.

Part IV. Recommendations

The participants of the workshop have made the following recommendations:

1. UNESCO is requested to continue the organization of workshop of this type with clear relevance to concerns and challenges facing transition economies, due to the long, complicated and sometimes painful nature of the transition process;
2. Future activities should be focused on some of the following major issues and challenges facing higher education in transition toward market economies such as legislation, corporatization, role of private sector in higher education, quality assurance, multiplication and diversification of financial resources, academic freedom and institutional autonomy;
3. Networking of policy makers from transition economies for periodical exchange of experience be better started at the sub-regional level;
4. The second workshop is proposed to be held in Viet Nam in 1999 in co-sponsorship with SEAMEO RIHED, both of which expressed wilingness to host it;

5. The term transition economies in the title of the workshop is proposed to be changed into transition toward market economies; and
6. National and sub-regional workshops in this nature should be encouraged with assistance from UNESCO, RIHED, ADB and other agencies.

Part V. Closing

Professor Anuwar Ali, Director of Higher Education Department of the Ministry of Education, Malaysia, represented all participants to express the satisfaction with the excellent service provided by the local host, Shaanxi Education Commission and sincere gratitude to UNESCO PROAP, the Chinese National Commission for UNESCO and the local host for the hospitality and assistance which made it possible for all participants from the various transition economies to be able to gather in Xi-an. He expressed the satisfaction with the fruitful outcome of the workshop.

Professor Wang Yibing, Programme Specialist in PROAP expressed thanks to local hosts, the National Commission and all participants for the hard working spirit and their contribution to the success of the workshop.

Mr. Yu Fuzeng, Assistant Minister of the Chinese State Education and Secretary General of the National Commission for UNESCO appreciated highly the full participation of the transition economies in Asia and initiatives taken by PROAP in organizing the workshop which is very relevant to the challenges facing the transition countries in the region. He highlighted the importance of the continuation of such exchange of experiences and lessons from the transition process. He endorses with appreciation the proposal to prepare a draft resolution to be submitted to the coming General Conference requesting the Director General of UNESCO to take concrete measures to support the activities reflecting the urgent concern of and challenges facing higher education in the transition economies.

II

Country Reports

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Cambodia

Mak Nang

Department of Higher Education

Ministry of Education, Youth and Sports

Phnom Penh

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■ Country Profile

The Kingdom of Cambodia covers over 181,035 square kilometers, bordered by the Socialist Republic of Viet Nam to the East, the gulf of Thailand to the South, Thailand to the West and Laos People's Democratic Republic to the North.

■ National Education System

Much of the Educational infrastructure was destroyed by war. The constitution of the Kingdom of Cambodia has defined clearly a democracy and pluralistic government structure. Chapter 6 states the right to obtain education. Every citizen has an equal right to obtain equal education at basic level and the government shall establish a general and universal education system throughout the country. The education principles aim at training people equitably and according to their capacity to enable them to earn a living. The new constitution promulgates compulsory education for nine years and guaranteed quality education for all Cambodians. There will be a restructuring of educational system from eleven years to twelve years of schooling. Cambodian educational system is a complete one from pre-school (3 years),Primary school (6 years) ,lower secondary school (3 years), upper secondary school (3 years) and tertiary education (4-7 years). Vocational and technical Education and Training is conducted from 1 year to 3-5 years. Non-formal education also contributes to citizens training.

The educational system is primarily defined by an overall governance structure. The educational system is heavily centralized with three levels of governance responsible for its management. At the central level, the Ministry of Education Youth and Sport (MOEYS) has overall responsibility for establishing national policies and curriculum guidelines. Some tertiary institutions and vocational and technical secondary education are under the governance of other technical ministries (Ministry of Agriculture, Health ,etc.).

The other two levels are at the provincial district administration. The MOEYS in the future will not only formulate the national policies, but also the budget and implement educational development project within the national policy framework and budget allocation. All kinds of private schools are allowed to operate according to the curriculum development approved by the Ministry of Education, Youth and Sport.

■ Higher Education System

Although faced with unstable political situations, efforts have been made by the government throughout the 1980's to re-establish some Higher Education institutions. A network of nine institutions have been established which covers a number of areas, for

instance, agriculture, medical science, economics, industrial technology, teacher training, foreign languages, law, art and culture. The nine institutions of higher education are:

1. University of Phnom Penh (UPP)
2. Institute of Technology of Cambodia (ITC)
3. Faculty of Medicine, Pharmacy and Dentistry
4. Royal University of Agriculture
5. Royal University of Fine Arts
6. Faculty of Business
7. Faculty of Law and Economics Science
8. Faculty of Pedagogy
9. Maharishi Verdic University

Cambodia has been undergoing a transition from command economy to free market economy. This transition reflects in many ways in economy such as GDP growth and inflation fluctuation, financial imbalance and high budget deficits. In education, the consequences are similar. During the political and economic transition from one-party socialist system to a multi-party market economy, the aims and goals and strategies of Higher Education have been changed to meet emerging demands. This challenging change requires an overall reform in all keys in Cambodian Higher Education System.

■ Policy Initiatives

The present situation in Cambodia offers favorable opportunities for educational reforms. Based on the short-term and long-term interests and perspectives, the policy orientation in higher education can be considered these three areas: Reform, Restructure and Rehabilitation.

Reform is aimed at establishing a new operational mechanism of higher education which will play a dynamic and strategic role in the new developing market-oriented economy and be actively responsive to the changing society.

Although Cambodia only adopted the centralized planning economy for about one decade, the problems facing higher education in terms of operational mechanism are more or less the same as those in other socialist or former socialist countries. They are characterized by the following problems:

- enrolment of student (policy of admission);
- financing and budget allocation;
- appointment of rectors vice rectors;
- tuition fees and issue of equality;

- government control and institutional autonomy;
- graduates job assignment, role of market forces in adjustment demand and supply of graduates; and
- motivation and desirability of institutions to the changing society and surrounding community.

Some efforts have been made by the government since late 1980s to make changes. However, progress was not satisfactory. The accelerating process adjusting to market-oriented economic reform in the country has been made and will be made to continue to make it an absolute necessity to carry out a corresponding reform in higher education.

Restructuring is aimed at establishing a higher education system through a readjustment institutions disciplines, courses and curriculum in order to make them relevant to the Cambodian context, and at the same time be in line with global trends as well in terms of structure, content and management.

The present organization of higher education can be characterized by significant fragmentation in policy and programming and a lack of co-ordination. Higher educational institutions have been under the jurisdiction of four ministries. A consequence of this is:

- institutions have become narrowly specialized and separated; and
- institutions have little or no horizontal linkage with each other and are only responsive to the instructions of the ministry to which they belong.

Because of the departmentalization and the guaranteed job assignment system of graduates:

- institutions lack motivation to make necessary adjustment to respond to the changing surrounding in terms of structure of course, levels, programs and curriculum; and
- there are no mechanism for articulation, the accumulation of "credit points" and transfer between institutions.

Experiences have shown that:

- this model lacks co-ordination and external efficiency to limit the institution's waste of resources;
- academically it impedes the interdisciplinary and multi-disciplinary process; and
- graduates lack the trainability and marketability required by market-oriented economy which is an important component to gradually build the labor market.

Reform and structuring of higher education system is a precondition for any future development. This will require an almost complete overhaul of the organizational structure and government institutions. Reform and restructuring should go hand in hand with implementation.

Rehabilitation is aimed to bring back higher education to normal track by consolidating the teaching staff, improving teacher status and quality and providing minimum standard facilities to lay down a solid foundation for the future development in the direct set as a goal for reform and restructuring.

The recovery and development of the economy and the expansion of upper secondary education has put more pressure on higher education. Not only to improve the quality, but for further quantitative expansion.

However, there is a big gap between this demand and the real capacity of higher educational institutions in terms of teaching staff quality, curriculum development and the existing equipment which is far from satisfaction. Therefore, at present, it is difficult, if not impossible, for higher educational institutions to play their expected role in providing qualified manpower for economic and social development. Solutions must be found and firmly implemented as urgent rehabilitation actions.

The outcomes expected from the policy of the "Rs" are:

- new dynamic mechanisms;
- the provision needs relevant structures;
- new standards that guarantee quality; and
- new management which offers efficiency.

To meet the national restoration and the development in the present stage and in the long-term, a "National Higher Education Task Force" was established in 1995 by UNESCO and World Bank to improve the quality of higher education. Its main objective was to co-ordinate a National Action Plan for higher education. The Task Force is in the process of collecting information on higher education. The information will be used to create a proposal for the reform and improvement of the whole structure of higher education responding to the needs of economic and social development of Cambodia. The aim of the higher education plan is to be comprehensive, touching on all aspects activities and administrative concerns in higher education.

Cambodia's future entry into ASEAN will have very good impacts on overall development of the country and means that Cambodia will learn a lot from ASEAN countries in order to be equal partner with those nations.

■ Internationalization of Higher Education

Cambodian HEIs face problems of resolution of the global characteristics of learning and research. Most of HEIs lack research activities, since there is no economic and political promotion, even HE and research are informally related. This impedes the process of co-operation between Cambodian HEIs and international counterparts.

International Co-operation for institutional development has a vital role to play in ensuring access to and in facilitating the transfer of knowledge, especially for a country such as Cambodia, that has been devastated by war. By virtue of their vocation,, higher education institutions should be ready to assume a leading role in ensuring the universal dissemination of knowledge in promotion and development of their fellow institutions worldwide.

The quality gap between academic institutions in different parts of the world is a direct reflection of the wider economic and social imbalance existing between country and the region. International co-operation, especially for academic research needs to be more developed in order to reduce the gap between nations and regions in the fields of science and technology and to improve understanding between individuals and between people so as to promote and preserve culture and peace.

■ Co-operation Programmes (Proposal)

National Level

In general, the picture of human resources of Cambodia reflects the damages caused by war, meager health care and poverty. The present stage of human resources is also characterized by the absence of qualified personnel. Cambodia has recently begun to re-establish its higher education system after the conflict of the past. Therefore Cambodia greatly needs assistance for development of Higher Education.

Different forms of co-operation at national level are required in order to upgrade Higher Education to its optimum and most functional level. Not only does this include building the capacity of teaching and administrative staff, but should include national standards of curriculum and examination that are acceptable and accredited outside Cambodia. Further more attention should be paid to national co-operation of the physical resources and equipment.

National Audit

The process of national co-operation should, at the start, include a national audit of present situation in higher educational institutions. Before moving forwards, it is necessary to know and fully understand the existing situation. Not only its problems, but also areas

where there are comparative advantages. Without knowing and understanding where we are at the present, we can not step off in the right direction. Therefore, it is only through a careful audit and analysis of the present situation that the nature and extent of the needs of higher educational institutions can be addressed properly.

Of course this can only be done in an environment of open co-operation between government, higher educational institutions, other providers of higher education, multi and bilateral donors and investors and the various sectors of society including the business sector.

Therefore, through a process of national co-operation, an audit and analysis of higher educational needs should be implemented. From the analysis, a vision can be prepared from which a master plan for the development of higher education can be prepared. This may include:

- legislative policy that gives more autonomy and accountability to higher educational institutions.
- a national system of standards of an accreditation for administrative and teaching staff;
- national standards for higher educational enrolments, curriculum and accreditation which is linked or leads to regional standards;
- agreement for strategies of co-operation and co-ordination;
- a higher education system with autonomy and accountability; and
- the national master plan should be linked to national investment, development and co-operation in order to identify specific priority areas where multi and bilateral funding agencies can confidently contribute with the assurance of making a significant contribution within their financial and professional capacity.

Regional Level

Many regional countries have much to offer in advanced technology and methodological approaches for higher education. However, they have also learned invaluable lessons through their early experiences at particular stages of development of their own higher educational systems. Furthermore, although there are regional differences, there are also many regional similarities of culture and economic and social needs. It is therefore important that a dialectical process that fosters the exchange of information and ideas in an open and co-operative ways be established in order to benefit from the experiences and lessons learned by other regional countries.

It is therefore suggested that a network of communication and exchange of ideas with other regional higher institutional bodies and authorities be established

This may with a view to:

- creating a system of exchange of lessons learned, ideas and how to adjust and best utilize the advancement in technology and methodologies for higher education (much of this can be done through technological linkages, for instance, internet, satellite link-up and exchange of software and hardware).
- fellowships, study tours, and training programmes;
- exchange of teaching and academic staff;
- seeking co-operative funding programmes to the mutual benefit of higher institutions, and
- combination study programmes, including commencing studies at the national level and completing them at a regional institution until Cambodia optimizes its own institutions.

International Level

There are many ways in which the international community can provide assistance to Cambodia in its efforts to re-establish a functioning and relevant higher education system This will include:

- direct multi or bilateral aid programmes, either though the Royal government for specific areas or by the provision of support to specific higher educational institutions;
- provision of assistance from overseas institutions to assist with the planning and development of higher educational policies and at the executive level, training national officials and executives and implementation of Royal government policies on higher education;
- the direct provision of technical assistance to train or retrain administrators, teaching staff or academic staff;
- the direct provision for rehabilitation of physical infrastructure and equipment
- the development of linkages with relevant international higher educational institutions(this may include a programme of accreditation through a process of examination and staff exchange);
- the provision of scholarships, fellowships or study tours, and
- assistance with specific programmes for example curriculum development, teacher training or academic examination

■ Challenges and Factors Affecting Cambodian Higher Education

There are many issues and problems effecting Cambodian HE directly and indirectly in transition economies in different sections.

Economy in transition: This economy is characterized by low government revenues, high budget deficits, account imbalances and uneven inflation rates. Heavy reliance on external assistance is another feature of the Cambodian economy. This has a negative impact on HE in terms of the government's inability to provide sufficient funds for educational activities.

Total financial dependence on government budget and external assistance: Fees are not charged and HE expenditures are solely subsidized by fund from the government and external assistance. This has resulted in low capacity of HE institutions to generate their own additional incomes. The understanding of the concept of financial autonomy, cost-sharing and user charge is still very limited among some HE institutions.

Financial constrain: Low funding for education, and HE in particular, has led to severe financial constraint in both capital and recurrent expenditures. This problem has led to many other issues which have caused poor quality of education delivery and outcomes. Pressures are being put on HE institutions to diversify their income sources to tackle the problem of low funding.

Other competing sectors for limited resources: There are large sectors with high priorities which absorb large shares of the government budget such as agriculture, defense, health care, etc. Basic education is another emerging competitor in the education budget. Hence, any attempt to assess the scope for HE budget allocation must take this factor into account.

Shortage of physical facilities: There are not enough buildings, laboratories, libraries, and the existing ones are seriously in poor conditions. Existing small libraries are often un-equipped or crowded with irrelevant materials. Lack of funding has resulted in poor provision of and difficult access to proper teaching and learning materials.

Poor human resources: This is caused by both under-qualification and low commitments of the staff service. It is understandable why this problem exists and still perpetuates. The transition from the Pol Pot regime is not yet over and the current levels of salaries of the civil servants are very low.

People's poverty: About 80 per cent of the total population is engaged in agriculture, which has so far been associated with subsistence food production. Poverty is one of the main economic reasons for individual inability to invest in HE, even if they wish to do so.

Excess demand: The recent sharp increase in enrolments has caused severe constraints to the supply capacity of Cambodian HE. When demand is greater than supply, capacity must be improved. However, in the present context, it is hard to access how far the capacity of Cambodian HE can be improved.

Lack of legislation and co-ordination for HE: This has resulted in unclear roles of HE in the social and economic contexts. Confusion of duty, structures and status is a constraint to proper policy and planning for HE. The absence of a body of HE co-ordination adds to the difficulties in HE policy formulation and implementation, especially in relation to financing.

■ Income Generation Capacity in Higher Education

The capacity of a HE institution to generate private income is effected and to a certain extent determined by several equalities. These qualities are criteria which should be fulfilled by self-reliant high quality HE institutions. the success in private income generation depends on where an institution is properly equipped with these qualities.

Entrepreneurial attitude to self-reliance: Entrepreneurial attitude is very important quality which involves initiatives and efforts by HE institutions to become financially sustainable, autonomous and accountable. A high priority should be accorded to building up an entrepreneurial culture within an institution. It is the first and foremost toward building up the capacity of income generation.

Programme responsiveness to the market: The capacity of income generation also depends very much on how responsive programmes of HE institutions are to the market. To involve individuals in sharing the costs of HE, programmes offered must be as market oriented as possible, highly relevant to employment available, and flexible enough to the needs of the market. By building up the income generation capacity, a HE institution is also increasing or trying to increase the level of flexibility and responsiveness of its programmes geared to the right types of employment. The consequence is simple to state: HE institutions which offer programmes irrelevant to the market needs are not likely to attract many students and services purchasers. this in turn results in lower income from private sources.

Guaranteed quality outputs: While it is important that programmes offered in HE are relevant and responsive to the market needs, the outputs must also be of a high quality. Potential buyers of any goods usually consider the quality of the goods before they decide to invest their money in. This also applies to HE services. There might be several suppliers of the same services, and they may all be equally relevant to the market. But, buyers always head for services/products with the highest quality. It should also be reminded that HE is a long term investment. Buying a product of HE is not quite the same

as buying some other goods, which can be refunded or rebought if not satisfied. Investment in HE is a lifetime investment, and one mistake is a lifetime mistake. Thus, potential payers are very careful about making choice of what kind of products they wish to purchase. This justifies for a HE institution's greater responsiveness to the market requirements in terms of the quality of services/products.

Appropriate institutional infrastructure (Sloper 1995b, p. 175): The availability and capability of infrastructure in a given institution create the basis for delivering desired products or services necessary to attract customers in the market. Basic infrastructure which facilitates, or hampers, the process of income generation can be technical, personnel, or organizational (Sloper 1995b, p. 175). Technical infrastructure includes basic physical facilities such as appropriate lecture rooms, libraries, capacity of income generation is reduced or simply does not exist. Personnel infrastructure involves necessary human resources who are capable enough to handle complex issues and management of private income generation. This is also facilitated to a great extent by the way different department of a given institution are set up, work, and interact within the institution. Income generation cannot succeed without the existence of these three components of infrastructure: physical facilities, human resources, and institutional organization.

Vision of the future: Great value is given to the ability of institutional leadership to create and communicate the institution's vision of the future. Living institutions in the current competitive world cannot survive and prosper without a vision of their future direction. In planning what kinds of services to provide to meet the requirements of the market, visionary institutions have to anticipate what the market is likely to need beyond the present. This requires specialization in particular fields ('niche' markets). An institution's vision can communicated through a strategic plan, the institution's mission statement, or the performance of the institution.

Economic feasibility: This has already been discussed elsewhere in this thesis (see chapter 3, section 3.1.2 and chapter 5, section 5.1). Economic conditions of the country affect the individual capacity to contribute to HE. An institution may be well equipped with enough internal capacity to make individuals share the costs, but individuals may not be able to meet the requirements due to economic reasons. This challenges HE institutions to take advantages from economic prosperity whenever possible or not to expect too much from cost sharing measures to avoid disturbing the normal functioning of the market.

Political feasibility: Experience has shown that without clear political support the capacity of income generation is greatly reduced (UPPEEP 1996b). Payers, especially students, are reluctant to meet charges when there is no official approval from the concerned authorities. Proper functioning of cost sharing measures needs to be facilitated to a great extent by political support and commitment. Unfortunately, due to certain political platforms, cost sharing measure are not always favored politically in some

countries. It is necessary to first consider mobilizing political support if cost sharing is to be introduced in Cambodia.

It has been discussed that to build up the capacity to generate income from private sources, individual HE institutions need to have several qualities such as entrepreneurial attitude to self-reliance, programmes responsiveness to the market, the quality of outputs, institutional infrastructure, the vision of the institution's future, economic feasibility and political support.

■ Summary

Cambodia is striving to respond to a market-oriented environment. However, it has the disadvantages of suffering the loss of the over twenty years of experience since 1975. It has not only the loss of the administrators, teachers and academics killed or living overseas but the collective experience of the past higher education system. It is suffering from an infrastructure that has collapsed was shuttered or deteriorated and was later refocused to meet the philosophical needs of a now decaying Eastern-bloc system.

Cambodia, therefore, requires assistance from its close neighbors and from international community, especially from Asia Pacific countries, in order for it to re-engine and re-establish its higher educational system. Without assistance it can not become self-sufficient in providing higher education that will meet the immediate needs and the challenge of the future.

Rebuilding can only be done through a co-operative effort to analyze, plan and implement change at all levels of higher education and society. Cambodia can not do this alone, but it should be allowed to do it in a self-determining manner that allows its individual characteristics, personality and culture to exist side by side with new methodologies and technologies.

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Education is a peculiar phenomenon to human society. The progress of human society promotes the development of education, and the development of education, in its turn, promotes the progress of human society. Looking to the 21st century, people see more and more clearly that economic and social development is increasingly dependent on the progress of science, technology and education. Many countries, to accept the challenge and competition, are modifying their educational, scientific and technological, and economic strategies. China's economy has achieved the strategic target of quadrupling the GNP ahead of time, the economic structure is shifting to a socialist market economy, and the mode of economic growth is making a shift from extensive mode to intensive mode. Under the new situation, the higher education assumes an important, historical responsibility. It is of far-reaching importance for China's modernization drive to promote the reform and development of the higher education.

■ General Introduction

The significant task of higher education in China is to foster highly skilled personnel, to develop science, technology and culture, and to promote modernization drive. The regular higher education in China refers to tertiary level education provided by short-cycle (subdegree) programmes (2-3 years), first degree programmes (mostly 4 years), and postgraduate programmes (master's 2-3 years, doctoral 3 years), all offering training for formal academic qualifications.

In the past 48 years, regular higher education in China has made big strides. A multi-tiered and multi-formed network of higher education encompassing basically all branches of learning, more responsive to the needs of economic and social development of the country has taken shape, and been playing an important role in promoting China's economic construction, scientific and technological progress and social development.

There has been significant expansion of the scale of higher education. The number of regular higher education institutions (HEIs) increased from 207 in 1949 to 1,032 in 1996. Of the total, there are 79 comprehensive universities, 280 institutions of science and technology, 53 agriculture, 10 forestry, 123 medical and pharmacy, 232 teacher training, 15 languages, 75 finance and economics, 26 political science and law, 14 physical culture, 31 art, 12 minority institutions, and 82 short-cycle vocational colleges. Of these institutions, 424 are short-cycle HEIs and 608 are degree-level HEIs, among which 419 can offer postgraduate programmes. In addition, there are 321 research organizations offering postgraduate programmes in 1996. The total number of new entrants in subdegree, first degree and postgraduate programmes has reached 460,489, 505,323 and 59,398 respectively in 1996.

A large number of high-level people with professional skills have been trained. From 1949 to 1996, the higher education institutions turn out a total of 11.6 million subdegrees and

first degree graduates for society. In the period of 1981-1996, the cumulative number of doctoral degrees and master's degrees awarded are 25,944 and 319,969 respectively (including those trained in research organizations).

The structure of higher education has become more rational. In 1996, the students enrolled in short-cycle programmes reached 1,226,449 (38.5 per cent of total enrollment); in first degree programmes reached 1,794,630 (56.4 per cent). At the graduate level, there was a total enrollment of 162,322 students (5.1 per cent of total enrollment), including 35,203 (1.1 per cent) enrolled in doctoral programmes and 126,832 (4.0 per cent) enrolled in master's degree programmes. All over the country, there was 2,421 doctoral programmes and 8,076 master's degree programmes offered by 419 HEIs and 321 research organizations.

In disciplinary structure, in 1996 there was 436,595 students enrolled in first degree and subdegree programmes of literature, history and philosophy (14.5 per cent of total enrollment); 565,710 enrolled in economics and law programmes (18.8 per cent); 121,770 in pedagogy programmes (4.0 per cent); 315,357 in science programmes (10.4 per cent); 1,212,554 in engineering programmes (40.1 per cent); 106,428 in agronomy (3.5 per cent); 262,665 in medicine and pharmacy (8.7 per cent).

The contingent of teaching staff has been constantly enlarged and strengthened. In 1996, the total number of full-time teachers employed in regular HEIs reached 402,469, a 25.1-fold increase over 1949, including 33,276 professors, 110,640 associate professors, 161,863 lectures, and the age structure of college teachers has been improved to some extent.

HEIs are also an important force that contributes to China's science and technology. Major achievements have been made in basic, applied and hi-tech research. In 1996, 50.6 per cent of Awards of State Invention and 31.3 per cent of State Awards for Scientific and Technological Progress were conferred on university scientists. In the fields of philosophy and social sciences, 65.9 per cent of research projects funded by Social Sciences Foundation was taken by university scholars in 1996. Up to 1996, there are 1,806 research units and 31 thousand researchers working in the fields of natural and applied sciences, and 1,596 research units and 63 thousand researchers in the fields of the humanities and social sciences affiliated to HEIs. About 500 university teaching and research programmes have been designated as priority ones and given greater financial support. 150 national-level key and specialized laboratories are established, and a number of national engineering research centers are under construction.

There has been a gradual expansion of international co-operation and exchange in education with the implementation of the policy of opening to the outside world. Since 1978, the number of students and visiting scholars going abroad for advanced studies in education and/or research institutions has exceeded 250,000, among them more than

80,000 have achieved their study and come back homeland. The cumulative number of foreign students learning in Chinese HEIs has over 170,000, and about 40,000 foreign experts have/had been employed by Chinese HEIs. The policy of opening to the outside world has made it possible for Chinese HEIs to learn from the good experiences of other countries and has promoted the reform and development of higher education in China.

■ Challenges for China's Higher Education

Although we have achieved great success in the regular higher education, we are aware that the regular higher education in China as a whole is still insufficiently developed and falls short of the needs for the 21st century. In the coming century, we shall meet more challenges.

The first challenge comes from the requirements set by the objective of China's economic development and economic restructuring. By the year of 2000, when China's population will have increased by 300 million over the 1980 census, the per capita GNP is to be quadrupled as compared with 1980, and people will live a relatively comfortable life. By 2010, the GNP of China is to be further doubled as compared with that in 2000. To accomplish this objective, we shall bring about two fundamental changes of overall significance. That is, the economic system will be changed from traditional planned economy to socialist market economy, and the mode of economic growth will be changed from extensive management to intensive management. With the establishment and perfection of the socialist market economy and the rapid and steady economic development, China will undoubtedly be fully involved in the tough global competition. To meet this challenge, we must depend on scientific and technological progress and raise the quality of labourers to promote economic development and train highly qualified personnel specializing in various fields needed in the 21st century. There is no doubt that the regular higher education in the 21st century will assume a more glorious and arduous mission.

The second challenge comes from the rapidly developing revolution in science and technology. The revolution in new technology that focuses on computers and communication technology has begun to help the human society to enter the unprecedented information era, promote the rapid development of human productive capacity and raise people's living standards. In the coming new century, high technology including micro-electronic technology and artificial intelligence will continue developing, and the rapid development and application of life science and biotechnology will bring good and good results for human health and happiness, and environmental science and material technology will improve the environment and resources on which the human race depends for its survival. Will the development of China's science and technology keep pace with the tide of the worldwide revolution in science and technology in the 21st century? Will the new generation of the Chinese labourers be adaptable to the rapid development of science and

technology in the 21st century and the new changes in production and social activities it has given rise to? The answers to these questions depend on education.

The third challenge comes from the requirements for promoting socialist ethical and cultural progress and social progress. Economic development is indispensable, but this is far from enough. The prosperity of society requires human wisdom, sense of responsibility, high ethical and cultural level and the improvement of the legal system. Therefore, we should lose no time in promoting economic development and material progress and at the same time attach great importance to the all-round social development and ethical and cultural progress. We should take the initiative to explore new ways of thinking and new methods for promoting ethical and cultural progress under the socialist market economy and gradually form the public opinion, values, moral standards, cultural conditions and legal system that are conducive to the socialist modernization drive. In the 21st century, the pattern of development for socialism with Chinese characteristics will be further perfected. China will embark on the path of sustainable development and all-round social progress through the co-ordination of the population, the resources, the environment, the society and the economy. To this end, efforts should be made to do work well in the coming five years. Ideological and moral education must be enhanced among young people to help them foster lofty ideals and nurture fine moral qualities, and to ensure that the new generation of labourers can develop morally, intellectually and physically and are imbued with the spirit of the time.

It is obvious that to meet the challenges in the 21st century, China's regular higher education must undergo further development and reform.

■ Strategies, Objectives and Conception

Strategies of the Development of China's Higher Education for the 21st Century and Conception of its Reform

The objectives for the development and reform of higher education in the 1990s are: The highly qualified skilled personnel trained by HEIs should meet the needs of economic and social development as well as the needs of the development of science and technology, resources should be mustered to run well a number of key universities and strengthen a number of designated priority fields or disciplines in an endeavor to develop a capability of training tertiary level personnel basically in domestic institutions and to raise significantly the quality of education, the level of science and technology, and the cost-effectiveness or efficiency of educational programmes.

The strategy of development and reform of higher education is that emphasis should be laid on the way of internal development, and the priority of the scale expansion should be given to the subdegree level programmes and the tertiary vocational education; in the

undergraduate and postgraduate programmes, more attention should be paid to improving the quality and efficiency, implementing the 211 Project step by step, and continuously uplifting the level of teaching, research and management.

In recent years, based on the analysis of reform experience in the more than 10 years, the State Education Commission (SEdC) has gradually formed a set of principles to fulfill the goals mentioned above. The principals can be briefly introduced as follows:

- The reform and development of higher education should adhere to a development policy enshrined in overall co-ordinating of scale, quality, structure and efficiency.
- In the reform of higher education, the reform of the educational structure is significant, the reform of teaching should be given top priority and the reform of the educational concept is the pre-condition for the above-mentioned reforms.
- The reform and development of higher education should respond to the requirements raised by the foundation of the socialist market economy, should promote the country's economic and social development, and also must abide by the self-rule of the higher education development.
- The development of higher education should gradually embark on the road of ruling by law and policy-making through scientific and democratic procedures.

Regular Higher Education by the Year of 2000 and 2010

During the last five years of this century, the state will properly enlarge education scale, optimize the structure of speciality and go a further step to improve educational quality and efficiency. It is expected that, by the year of 2000, the enrollment of subdegree and first degree level in the regular HEIs will increase to 3.7 million, and the enrollment of postgraduates will get to 200 thousand. Besides, total enrollment of subdegree and first degree level in adult HEIs will reach 2.6 million by the year of 2000.

With regard to the structure of higher education, during the next five years, priority will be given to the development of subdegree-level programmes, especially those catering to the manpower needs of the rural regions, the small and medium-sized enterprises (SMEs), rural enterprises, and the service sector in urban and rural areas, provided either by regular or adult HEIs. Total enrollment in these programmes will reach 3.6 million or so.

With respect to the structural composition of different fields of study, priority will be given to the applications-oriented fields or disciplines, and efforts will be made to develop these newly emerging fields and interdisciplinary fields of great relevance in an endeavor to guarantee the manpower needs of key industrial enterprises, educational and research institutions and various units of the defense sector.

By the year of 2010, the total enrollment in both regular and adult HEIs will reach 9.5 million or so, with number of college students per 100,000 population reaching 700 and the gross enrollment rates of the corresponding age group reaching 11 per cent or so. Total graduate enrollment will reach a level ranging from 300,000 to 350,000, with the number of master's and doctor's degrees awarded each year reaching at least 100,000.

Reform of the Educational Structure

In reforming all sectors of higher education, the reform of the educational structure is located in the key position. Its main focus has been placed on straightening out the relationships between the government, the society and the institutions with a view to gradually instituting a system of educational provision in which the government exercises macro-level control and the institutions may provide educational programmes autonomously in response to social needs.

The reform of the educational structure includes the following concepts:

- With regard to the structure of educational provision at the tertiary level, the old pattern that the state monopolizes the provision of higher education will be changed, and efforts will be made to bring into life a new pattern of educational provision in which most HEIs are run by the central government and provincial-level governments, supplemented by private HEIs, and the resources of all quarters of society may be pooled to develop higher education in various forms and through multiple channels.
- With regard to the management system of higher education, which is the keystone and nodes in the reform of the educational structure, it is envisaged that in the future a two-tiered management system comprising the central government and provincial-level governments should be developed, with appropriate division of labor between the two levels. It is incumbent upon a provincial-level government to assume greater responsibility in taking an integrated approach to the provision of higher education within the area under its jurisdiction and promote the collaboration between institutions run by central ministries and agencies and institutions run by local authorities. In recent years, various forms have been adopted within the country to speed up the reform.
- With regard to the system of financing higher education, efforts should be made to further develop and perfect a system of educational finance in which fiscal appropriations constitute the main source, to be supplemented by funds raised through multiple channels.
- There has been progress in reforms relating to the recruitment of new entrants and job placement for graduates. Active steps are being taken to abolish differences between public-supported students and self-supported students by establishing a single category

of partial-tuition-paying students and at the same time, steps will also be taken to institute and perfect systems of granting scholarships and loans, of providing work-study programmes, and of allowing partial or total waiver of tuition and other fees for students from low income families. Measures are also being taken to promote reforms in the employment of graduates. In the short-term, a policy of "developing contact between students and enterprises and promoting a two-way selection" will be implemented in the main.

- Reforms of the internal management system of HEIs will be constantly conducted in-depth, encompassing reforms of their personnel system, remuneration system, provision of housing, medical care system, retirement insurance system, and the gradual commercialization of supporting services so as to better motivate all staff and workers, to invigorate the vitality of the HEIs and enhance their ability to respond to the needs of economic and social development, to constantly raise the quality of education and the level of scientific research and the cost-effectiveness of their educational programmes.

Teaching Reform

In reforming all sectors of higher education, the reform in teaching is placed in the core position, in which the reform of course content and curriculum is the keystone and nodes. In recent years, as the reform of the educational structure is conducted in depth, the instructional reform has been placed on the important agenda. The main purpose of the instructional reform is to gradually set up a teaching management system responding to the educational provision and making the teaching and learning process full of activity, to improve the course content and curriculum to meet the needs of economy construction and respond to the trends of development of modern science and technology and culture, to develop a suitable mechanism with stimulation and competitiveness to bring into full play the enthusiasm and initiative of the teachers in teaching and students in learning, so as to uplift the quality of training and the cost-effectiveness of educational provision in HEIs to a new step.

■ Policy Measures and Progress of Reform

In order to fulfill the strategies of development and reform of higher education, in recent years much attention has been paid to the management system reform and the teaching reform. Till now, some progress has been made.

Reform of the Management System of Higher Education

In recent years, various forms have been adopted within the country to grope the management system reform, in which the principals are: (1) The pilot of "joint establishment", by which the central ministries and agencies jointly construct some HEIs with the local authorities, so as to weakening and modifying the formerly existing relationship of an HEI subordinated to the control of a single government agency, and widening the sources of educational finance and the sectors (regions) or target groups served. (2) The pilot of "joint operation", that is, based on self-willingness and reciprocity, the HEIs nearby in geography and levels share resources together, eke out weakness with each other's advantages, cross link disciplines, and develop in unison to raise educational levels and efficiencies jointly. (3) Where conditions permit, two or more institutions with different disciplinary groups or with small scale and single discipline may be merged into one single entity. This is briefly named "mergence". (4) The pilot of "collaboration", in this way it is encouraged that enterprises, enterprise groups and research institutions participate the construction and management of HEIs. (5) The pilot of "system-shifting", by which some centrally run institutions providing a significant number of general-purpose programmes or programmes serving local needs may be changed into locally run institutions.

Till 1996, there have been 316 HEIs participating the pilots of reforms mentioned above. Among which 56 HEIs have accepted the "joint establishment", 178 HEIs have launched the "joint operation", 103 HEIs have been merged into 42 HEIs, 145 HEIs have taken the "collaboration", and 7 centrally run institutions have been changed into locally run institutions.

With the reform of management system going deeply, the reform of the educational structure has been actively implemented, and to some degree, it has also driven the development of higher education entirely. For example, from 1990 to 1996, the average number of college students enrolled in first degree and subdegree programmes per HEI increases from 1919 to 2927, with student-teacher ratios increasing from 5.2:1 to 7.5:1. The scale economy of HEIs has been clearly improved.

Reforms related to Teaching

In teaching and learning aspect, following reforms have been conducted in recent years:

- By revising the catalogue of specialities and improving the management of various specialities, it is desirable to make the development of speciality more adaptable to the needs of social and economic development. China's disciplinary structure of higher education has been developed from pre-Soviet Union model. It has existed for such a long time that the profile of specialities was growing narrower and the curriculum almost remains intact and the programme served narrow needs. In order to change the

situation, the SEdC revised the list of specialities in 1987 and 1992. The total number of specialities has reduced from 1343 to 504. The profile of many specialities has been enlarged and a number of new specialities, mostly application-oriented, have been added. To some degree, the adaptability of graduates has been enhanced. Right now, the SEdC is conducting an activity to revise the list of specialities again, by which the total number of specialities will be reduced to about one half of the present's.

- More attention has been paid to training the basic quality and ability of graduates. A pilot of strengthening education of culture quality has been conducted. Through the pilot, some universities have begun to transform the educational concept, and to take measures to improve the teaching management and teaching process.
- In the instruction, on the one hand the course contents are updated with the new achievements of modern economy, culture, science and technology; on the other hand, the curriculum has been optimized according to the goal of training. In 1995, the SEdC launched a programme called Project of Course Content and Curriculum Reform in Higher Education. It is desirable that, by the project, a group of teachers who are rich in teaching experiences will be organized to carry on a deep study and pilot on the fatal problems related to the comprehensive and long term development of teaching reform. Now the programme is going smoothly and more than 10 thousand teachers and researchers from 300 above HEIs are involved in it.
- To ensure the teaching quality, various forms of quality assessment and evaluation system have been set up and perfected in recent years, to ensure that the level of provision and the quality of teaching and learning in various HEIs have been strongly supervised. A number of Supervisory Committees of Teaching Affairs who are responsible for research, advising and guiding on teaching and learning have been also established.
- More attention has been paid to develop the teaching and learning technology. The improvement of teaching and learning technology has positive effects on the teaching quality. In recent years, with the applying of computer technology to the teaching and learning process, more and more people have realized that the modernization of teaching and learning technology may cause deep changes in educational thought, concept and course content and curriculum. So some measures have been adopted to guide, encourage and support HEIs or teachers to develop and use the technology in their classes. A programme focusing on the courseware development and application has also been launched. At present, in computer assisted instruction (CAI), computer based learning (CBL) and others, more than 100 kinds of software have been developed and used in HEIs. Hundreds of them are being developed.

Project 211

In order to carry out the strategy of national development through science and education, and to meet the challenge of new technological revolution, the state has determined to implement Project 211, that is the Chinese government's new endeavor aimed at strengthening about 100 HEIs and a number of key disciplinary areas as a national priority for the 21st century. The State will serve to initiate, support, guide and readjust the development of the project from now. The overall goals of Project 211 are as follows:

During the period of the 9th Five-Year-Plan, the government will initiate actions to strengthen a number of HEIs and key disciplinary areas. It is envisaged that after several years' efforts some 100 HEIs and a group of key disciplinary areas will have greatly improved their quality of education, scientific research, management and institutional efficiency. In addition, these institutions will also have made remarkable progress in reforming the management system and consequently become the bases for training high-level professional manpower and solving major problems for the country's economic construction and social development. As a result of such efforts this group of institutions will set up national standards in overall quality, with some of the key universities and disciplinary areas approaching or reaching the advanced international standards. The majority of them will have enhanced their physical conditions and staff competence, in addition to noticeable achievements in human resources training and scientific research. Adapting to regional and sectoral development needs, these institutions are expected to play a key and exemplary role.

At present, sector preliminary examination of application for Project 211 has been completed. Some universities have completed their project feasibility study reports and begun to implement the projects approved by the government. Others are drawing up their project feasibility study reports.

In the recent decade, the reform of regular higher education has gained huge achievements, but many difficulties still stand ahead of us. At present, the important two are: the financial inputs are inadequate, and the HEIs need a period of time to adapt the transition of economic system. To solve the problems, the SEdC will make measures to increase the fiscal educational expenditures to 4 per cent of the GNP by the end of this century. At the same time, efforts will be made to further develop and perfect a system of educational finance in which fiscal appropriations constitute the main source, to be supplemented by funds raised through a variety of avenues, such as: collecting educational taxes and fees, charging tuition and miscellaneous fees for students attending post-compulsory educational institutions, developing school-run enterprises, encouraging donations and gifts from the society at large, funds-raising campaigns, and the establishment of educational funds, thus ensuring a greater increase of input of financial resources. On the other hand, the SEdC will strengthen system reform, especially the reform of management system, speed up the

work on laws and regulations of higher education, and develop an effective mechanism in which HEIs may respond to social needs and various quarters of society may support and participate in the development of HEIs actively and initiatively.

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Kyrgyzstan

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Ministry of Foreign Affairs

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■ The Development of Higher Education System in Kyrgyz Republic

The system of Higher Education started its development in the middle of XX century when the Kyrgyz republic was included into the USSR. The first Higher establishments were organized in the 30-s. In general they were the pedagogical institutes.

In the Autumn of 1932 in Frunze, the first higher education establishment — the Kyrgyz State Pedagogical Institute was opened. It included three faculties: the faculty of history, faculty of literature and the faculty of biology with the number of students constituting 73 persons. In a year the faculty of physics and mathematics was established.

Then in 1939 in Osh and in 1940 in Prjvalsk, 2-year teacher institutes with the faculties of history, physics and mathematics, geography and philology were arranged. The main aim of the first higher education establishment was to train the professional staff for illiteracy elimination.

The establishment of Zooveterinary Institute in 1933 and Kyrgyz Medical Institute in 1939 played a very important role for Kyrgyz population. In these institutes, before the II world war, 1350 specialists were trained. The special attention was paid to the involving of the native youth to the process of education.

The new step in the higher education system development was during the II world war. During this period about 10 Russian and Ukraine institutes were evacuated into the Kyrgyzstan and some of them joined the appropriate Kyrgyz ones. During 1941-1945, 2,460 specialists have been trained. Later it gave an opportunity to widen the network of higher education institutes. In 1942 in Frunze, the branch of All-Union Institute of finance and economics with the correspondence course was established. It contained the faculty of finance and credit and the faculty of economics and registration. And besides in 1944 the branch of All-Union library Institute was opened.

After the World War II, the system of higher education started a rapid development. More than 400 persons entered the first courses of five faculties of a new Kyrgyz State University. The 2, 3 and 4-year students of the former Pedagogical Institute continued their studies there. In the middle of the 60-s, the university started to play a very significant role in the system of higher education. It became a leading institution among the other ones. In 1956, about 356 specialists graduated from it and in 1960 there were 842 graduates. For the first 10 years, 6,233 specialists for the national economy and science were trained.

In a few years the Frunze Polytechnical Institute created on the basis of Kyrgyz State University's polytechnical faculty was established. It was developing very fast and soon became an important centre of experienced staff training. During the 1960-1961, about 2,130 students were studying in the university. In 1956 the number of first graduates of the Polytechnical Institute constituted 42 persons.

The system of higher education established after the II world war became very stable and strong source of training of specialists for the national economics branches in the 70-80s.

By the collapse of the USSR, there were 10 higher education establishments in Kyrgyz republic (five of them — pedagogical ones and 8 of them were located in Bishkek). They contained 55,400 students and 21,700 of teaching staff. The standards of education were the same as in the USSR. For the pedagogical institutes it was 4-years programme, for the universities and branch institutes — 5-year programme. The exception was the Medical Institute which had a programme of 6 and more years. All establishments were the state ones and were financed by the state budget.

However, by the end of 80s the higher education in Kyrgyzstan as well as the whole system turned into the great crisis which was the result of the deep social and economic changes in the society. The transition to the market economy together with inflation, unemployment, disconnection of traditional economic relations, etc. were very painful for the higher education. Because the budget means became very insignificant, the role of teaching activity and the higher education also fell down. The pedagogical, engineering and agricultural education became the most unpopular.

The teaching on the standard programmes, ideology and dogmatic of the educational programmes, the reproductive way of teaching, the centralized administration — all these factors led to the hinder in higher education system development. The quality of education also fell down.

As the result, Kyrgyzstan was to continue reforms arranged by the USSR government in the new political, social and economic situation.

One of the first legislative acts in the independent Kyrgyzstan was the "law about the education" (1992). It revealed the main principles of the new system of higher education in the republic. After the law ratification, rapid progress of the system's development took place.

The main aim of the reforms policy was to promote the transition of the higher education system towards the new quality and the entrance into the worldwide standards.

The main strategies are as follows:

- transition to the multi-level system of training;
- diversification of development of higher education system, establishment of different types of education and conditions for their realization in the market economy, taking into consideration factors such as the labour market, and educational demands;
- the development of a private sector in higher education;
- the change of finance system; and

- the democratization and decentralized administration in the sector of higher education, etc.

The main elements of policy and strategy in the system of higher education were defined in some government acts, such as the "Act about the state higher institutions"; "Act about private higher institutions"; "Act about higher institutions licenses"; "Act about colleges" (all documents are ratified as "The Legislative Act about Higher Education system in Kyrgyz Republic" of 25.08.93).

The new step in development and working out the policy and the strategy of higher education system was the President educational programme "Kadry XXI (1995) and the national educational programme "Belim"(1996). According to these programmes, the principles of innovations concerning the higher institutions were defined.

This newly established system (1992-1996) greatly changed the traditional structure of higher education system, the content of educational programmes, teaching technologies and results, the forms of arrangement, systems of financing and administration.

Not only reforms in higher education but also the social and economic changes in Kyrgyz society had a noticeable influence upon the alterations in the whole system. The USSR collapse led to the destruction of the united supply system, one of the consequences was the information blockade, the supply of new scientific literature and decreased textbook.

During this period of time due to Russian evacuation, many institutes lost most of experienced and professional specialists. The functioning of higher education system didn't have any scientific confirmation, because the republic did not possess its own centre which would be able to solve the problems of higher education institutes. In 1996 the Kyrgyz Research Institute for Higher Education Problems was established. It's main purpose was to study the modern processes in higher education. But now there are some doubts because of the small number or absence of the specialists, low payments, etc. this centre will struggle to survive instead of implementing the scientific programmes for higher education system development.

■ Present Situation in Higher Education

The sovereignty development period in Kyrgyz Republic was characterized by the rapid growth of changes which led to the creation of multi-level system of higher education programmes. The traditional programmes were made more modern. The new technology in the educational process appeared. Besides the great number of new higher schools, the private sector started its development. Before USSR collapse, there were only 10 higher institutes, now their number constitutes 39 ones.

Nowadays in Kyrgyzstan there are 27 state and 12 private higher education institutes. Among them are:

- 7 academies
- 16 universities
- 10 institutes
- 2 higher colleges
- 1 higher school
- 3 educational centers

In spite of the increased number of the institutes, there was no great growth of trained students (in 1991-1992, the daily, evening and correspondence courses of 12 higher education establishments trained 58,800 students, while in 1996-1997 their number was 66,700 ones).

Since 1992, the number of students who pay for their education constitutes 30 per cent from the whole number of students. In some institutes there are more such students in comparison with ones studying on the free-of-charge basis (mostly they are students who are trained in the evening or correspondence courses).

The selection of the students as it was previously is on the competitive basis. Till 1997, the students were passing exams organized individually by each institute. It caused many problems. In order to overcome them, the Ministry of Education, Science and Culture established the unified system of tests according to the state educational standards. National test centre was opened. The purpose of this centre is to work out and implement unified standard tests. Some international organizations such as UNDP and DANIDA, rendered an assistance for its development.

Today, the educational programmes have a mixed character. The traditional 5-years programmes as well as the new multi-level ones are implemented in higher institutions. The multi-level education in Kyrgyzstan has the following categories:

1. higher education of 2-year studies on the programmes which are the basis for Bachelor degree;
2. higher education of 4-year studies on the programmes including the principle trainees for Bachelor degree — since 1992;
3. higher education for the Master degree — since 1996;
4. Fourth level including post-graduate course which foresees the thesis defence and gives an opportunity to obtain the degree of the Doctor of science.

According to the common system of arrangement, the Ministry of Education and Science today is the main organ of administration. Its main duty is the implementation of state's education policy. One of Ministry subdivisions is the Central Administration of higher education establishments and of special professional establishments which fulfill the law.

The special subdivisions of the Ministry looks after the issues concerning the international connections, grants, licenses and establishments' certification. The Ministry signed 18 agreements among Kyrgyz and international education organizations. The Ministry cooperates with some international organizations such as TEMPUS, UNDP, UNICEF, UNESCO, DANIDA, etc.

■ Higher Education in a Period of Transition to the Market Economy

The state policy during this period is based on:

- access
- quality
- integration to the world community; and
- new means of administration and financing.

The issue of access has been solved rather successfully. There is no gender or national discrimination. The percentage of studying women is still high (58 per cent except the scientific sector). Seventy-five per cent of all students are Kyrgyz, 16.1 per cent — Russian, 1.0 per cent — tartar, 0.9 per cent — Uzbek, 0.7 per cent — Korean. Today, in all regions, there are universities and other higher establishments.

The problem of education quality became very acute. The rapid growth of higher schools has met with the slow growth of teaching staff. The small payment doesn't attract the youth and to strengthen its abilities. But in fact, in 1997 the payment of the teaching staff in higher schools was increased: the Bachelors of Science got three times higher salaries, the Doctors of Science — six ones. But the issue of quality has not been solved by the action of government.

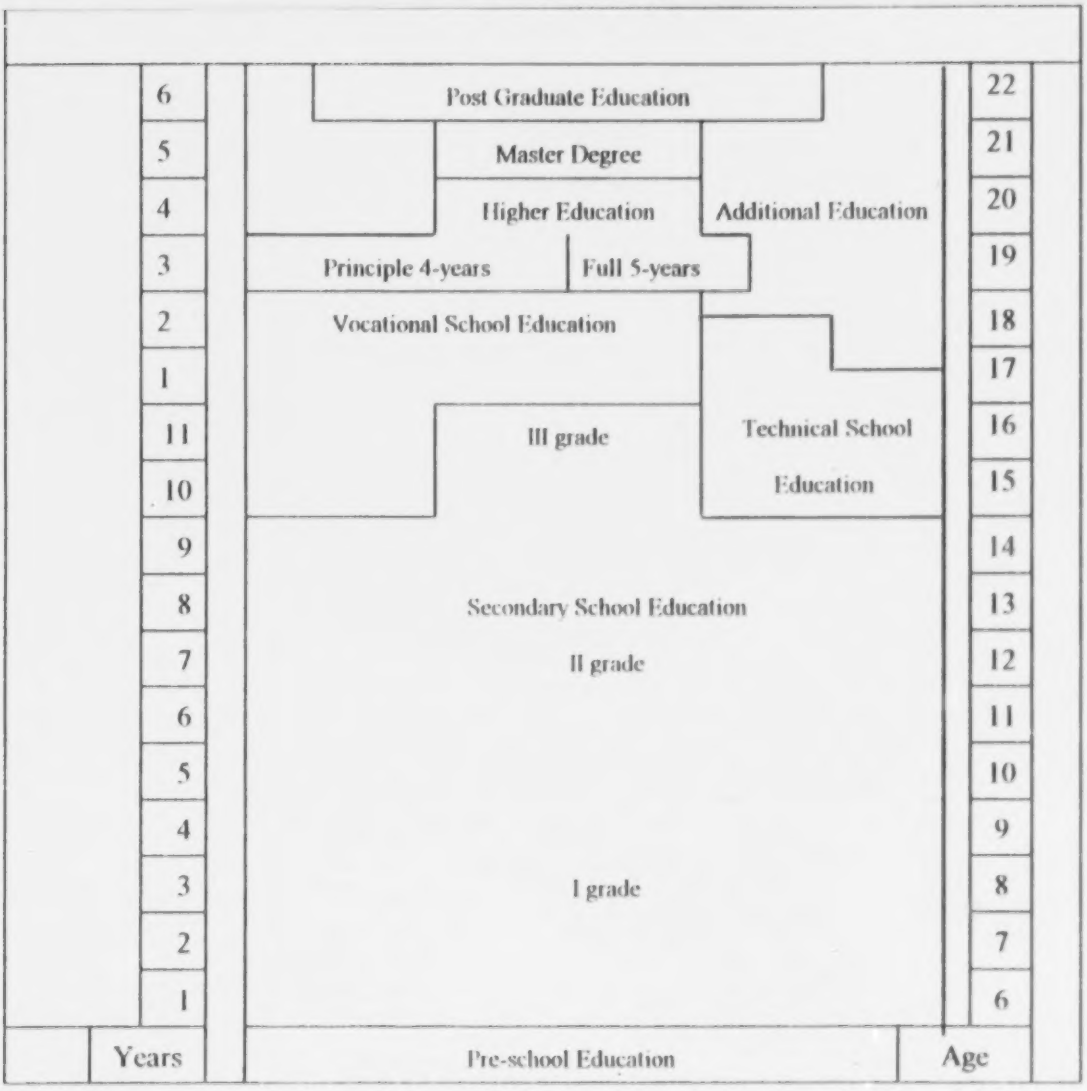
The greatest problems and contradictions during this period of transition to market economy are connected with the system of higher education financing. The absence of sufficient funds is the most important problem since the national currency was introduced. Despite that the centralized system of finance distribution was eliminated with higher education establishments ran into the high level of inflation and constantly decreased budget given by the Ministry of Finances which was the main source of getting money. In 1993 higher education establishments received 41.3 per cent its budget from Government, in 1994 — 41.5 per cent, in 1995-1996 — 46.4 per cent. No money is paid for "business trip". The money is paid only to the administrative staff for its expenses in business trip in Kyrgyzstan and abroad.

Against this background, prestigious subjects as Economics, Finances, Management, Law, Foreign Languages were encouraged. However such trend reflects the demands mostly of the richest families and enterprises. Some other disciplines are not so popular and the state cannot manage then.

Since 1992, some "donor organizations" started to render financial assistance to the higher education institutions. Among them are Asian Development Bank, UNDP, UNESCO, DANIDA, Soros Foundation, EC organizations (TASIS, TEMPUS). The principal assistance of these organizations consists in making consultations, textbooks, technical equipment supply, arrangement of Kyrgyz specialists participation in the international conferences, student and teacher exchange and the training activity.

In the August of 1997 Kyrgyz Research Institute for Higher Education issues together with UNESCO and ADB signed the contract for research work "Regional Study of Trends, Issues and Policies in Higher Education", which, as we hope, will help to analyze the situation in higher education and its prospects in my country.

Education System in Kyrgyzstan



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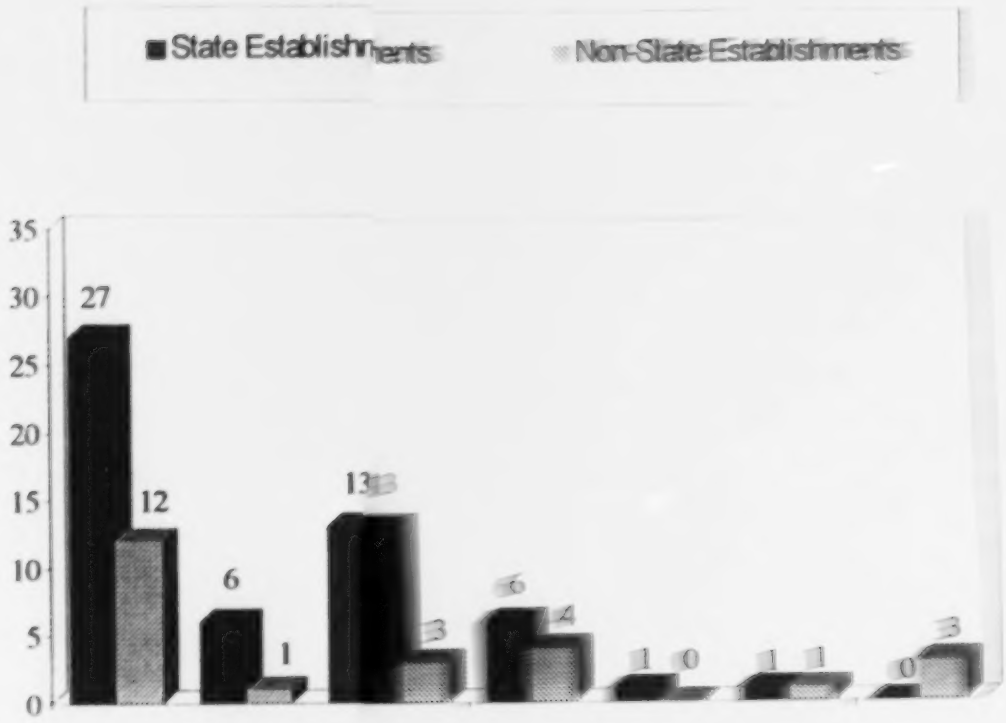
State Establishments
Non-State Establishments
35
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25
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12
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13
3
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1
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1
1
0
3

Credits and Grants received from 1992 to 1996

Title of help	Year	Donor	Sum US$
Training staff in education during project of development and social protection	1994	World Bank	4,900,900
Supporting the sector Education	1994	Denmark	1,113,000
Publishing school books	1995	Germany	1,666,000
Paying the sector Education	1994	Asia Bank of Development	25,000,000
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
Language training	1995	EU	1,250,000
Supporting the professional education	1993	Germany	1,560,000
Increasing the financial project Supporting professional education and bank training specialists	1996	Germany	1,820,000
Training by Japan International Cooperation Agency (JAICA)	1993	Japan	800,000
Training by Asian Organization of Productivity	1993	Japan	200,000
Training in planning and management in Education	1993	UNDP	14,500
Test National Centre	1995	UNDP	295,000
Training Project of Commercial Law	1996	USAID	1,229,943
Education in Kyrgyz Republic	1995	USAID	3,746,959
Reform and Training in CIS	1994	USAID	2,052,887
Management Staff Courses Training of Kyrgyz Republic	1996	Turkey	30,135

Lao PDR

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■ Background

Socio-Economic Profile

Lao PDR, a landlocked country, bordered by China, Myanmar, Thailand, Cambodia and Viet Nam, covers an area of about 236,800 square kms. It is a predominantly agricultural country, with about 85 per cent of the population being farmers. It has many rivers which provide vast potential for water power. The country is mountainous making transportation and communication difficult.

In 1986, Lao PDR adopted a programme of structural reform known as the New Economic Mechanism (NEM), the main objective of which is to accelerate the transition from a centrally planned economy to the market oriented economy.

The Government has now initiated some type of adjustment. Since the adoption of the NEM, several measures were made flexible and now cover the entire population of approximately 4.5 million people. The GDP growth average per annum was 6 per cent from 1990 to 1996, per capita income was from US$ 185.00 in 1990 to about US$ 345 in 1995 and approximately US$ 400 in 1996, inflation rate was 10 per cent in 1992, 6.8 per cent in 1993, 19 per cent in 1995 and 13 per cent in 1996. These achievements have strengthened the confidence of the private sector and attracted foreign investments.

Due to the improved economic environment for private sector development, actual foreign investment inflow increased from about $10 million in 1992 to some $160 million in 1996. Of a total amount of approved foreign investment licenses (about $6.7 billion between 1988 and 1996), only about 6 per cent has actually been made. Without the hydro-electric power component (i.e. about half of the total licensed investment to date), actual foreign investment has equaled only 24 per cent of the licensed total.

Catastrophic flooding was the main cause of the fall in the agricultural sector's growth rates from 8.3 per cent in 1994 to 4.9 per cent in 1995, and again in 1996, when severe and widespread flooding seriously compromised output growth and food security in 1997.

The financing of Lao development has been heavily dependent on foreign savings through loans, grants and private investment. Foreign loans and investment made up one fifth of GDP in 1995, while grants amounted to approximately 12 per cent. four fifths of public investment is funded by foreign capital inflows, since domestic savings, both Government and private, are still very low. Ultimately a much higher domestic savings level is needed to finance domestic investment required for continued GDP growth.

The Lao PDR considers sustainable and equitable development as its over-arching goal. Over the last ten years, development efforts have gone through three stages, which are ultimately inter-linked.

1. the establishment of the New Economic Mechanism (NEM);
2. the consequent structural transformation and capacity-building of the economy; and
3. the creation and building up of the prerequisites for a people-centered and sustainable development (sustained growth with equity).

The Lao PDR development efforts aims also at achieving two consistent transitions:

- first, from a command economy to a market economy; and
- second, from subsistence-based and isolated rural economy to a production and service economy, guided by the State through market forces and private initiative.

The Lao PDR's ultimate economic development target is to permanently move from the status of a least developed country by the year 2020 through sustainable and equitable development.

Education Sector Development

A number of detailed studies, undertaken in the last five years, have helped provide the Lao PDR Government with a much clearer view of the complexity of the poverty situation in the country and enabled the formulation of approaches aimed at the most pressing aspects, namely education and health. The Lao PDR has committed itself to the internationally agreed target of 20 per cent of public expenditures on health and education.

The relative share of education and health in the national budget has been markedly increased: Government increased the share of education in capital expenditure from 3 per cent in 1989 to 8 per cent in 1995, with adequate funding for recurrent expenditures.

History of Higher Education

The Higher Education in the Lao PDR has been formed since 1969, after the release of the Royal Decree concerning the creation of Sisavangvong University which encompassed four higher institutions: Superior Pedagogy Institute (Dongdok), Royal Medical Institute, Royal Laws and Administration Institute and Buddhism Education Institute. The three first institutions were under the same umbrella of the Ministry of Education and Sports. Whereas the latter belonged to the Ministry of Culture. After the completed National Liberation, these institutions changed their names, and most of them modified their curriculum. As a result, the Sisavangvong University no longer existed.

In 1995, the post secondary education system in Lao PDR consisted of 37 small public institutions managed by seven ministries, one province, one municipality and the Prime Minister's office. Of these, 10 were offering or preparing to offer degree-level courses

while 27 are certificate-granting technical and vocational schools. The proliferation of small post secondary institutions resulted in higher cost per graduate.

The students/teachers ratio was low at less than seven students per one teaching staff, which is less than half that of similar institutions in many other countries, indicating inefficiency as well as the potential to increase output without increasing the total number of teaching staff. Such internal inefficiency was, of course, related to low investment in education and poor overall quality of teaching, learning materials and school facilities.

Issues in Higher Education

The main issues facing Lao PDR post secondary education are:

- the shortage of human resources educated at university level to support its socio-economic development under the New Economic Mechanism. This shortage of necessary skills and knowledge limits the absorptive capacity and hampers effective implementation of socio-economic development efforts. However, the post secondary education system cannot respond to the overriding need to produce more and better qualified human resources because of its present systemic weakness;
- the low quality of post secondary education which is partly because of the poor quality of education at the upper secondary level, which needs to be supplemented by preparatory programmes in post secondary institutions or the School of Foundation Study at National University, the inadequacy of the programmes; the dilapidated facilities; the under-qualified teaching staff;
- the low external efficiency, as there is little mechanism to reflect the needs of the society in determining curricula, or to relate labor market demand to the supply capacity of institutions. No system has been developed to assist the placement of graduates as they were in the past fully absorbed by the Government;
- the low efficiency of planning, management and co-ordination of post secondary education; and
- the low financing of post secondary education.

■ Present Situation of Higher Education

National Education System

➢ National Education Policy

In 1987, the Educational objectives were redesigned in the context of overall economic development and in harmony with the New Economic Mechanism. The reformulation

placed education as the productive force in local socio-economic development and priority was given to upgrading management planning programmes and quality of education. The transition to a free market economy requires increasing the education system's ability to provide the skilled work force at all levels needed by a modern economy.

➢ The National Education System

- *General Education*

  The education system comprises pre-schools education (crèche and kindergarten), primary education (5 years), lower secondary education (3 years), upper secondary education (3 years).

- *Non-Formal Education*

  There are non-formal education offering three types of programmes:

  - literacy training for out of school adults;
  - upgrading programmes for adult; and
  - upgrading programmes for government cadres.

- *Private Education*

  There are also private education offering programmes from kindergarten to upper secondary schools and vocational and technical training. The private education has been encouraged by the government since 1990. The number of private schools increase quickly. A new decree of the Prime Minister on private education dated 14 August 1995 has considerably encouraged the investment of the Lao citizens and foreigners in Education.

- *Vocational and Technical Education*

  The Vocational and Technical Education in Lao PDR are in the process of reform:

  - Vocational schools for training skills workers will be transformed from 8+2 system to 8+3 system; and
  - Middle technical schools for training middle technicians will be transformed from 8+3 system to 11+2 system.

- *Higher Education*

  Higher Education in Lao PDR is in the process of reform. At the end of 1997, after amalgamating 10 higher learning institutions located in Vientiane to National University, the state higher institutions in Lao PDR are:

- 1 National University of Laos (NUOL), located in Municipality of Vientiane offering Bachelor Degree and Diploma Degree Courses;
- 4 Teachers Training Colleges offering Diploma in pedagogy located in Luang Prabang, Vientiane, Savannakhet and Champassack for teachers in lower secondary schools. In the next future, these colleges will be transformed into "Regional colleges" to better serve the community and also NUOL. There is no post-secondary institute which awards Master or Doctoral degree in in the Lao PDR at the present.

So far, there are some private higher institutions in Lao PDR which are not yet recognized by the Ministry of Education.

Administrative Structure of Higher Education

Before 1995, the administration of higher institutions was complex: the processes of planning, administering and financing of higher technical institutions and degree granting institutions were with different ministries and authorities; these organizations directly negotiated funding for their education and training activities with the Ministry of Finance; there were few co-ordinating mechanisms; the MOE was responsible for overall policy direction and quality control; the Department of Higher, Technical and Vocational Education (HTVED) within MOE was responsible for management and co-ordination of the country's post secondary sub-sector, including the overall supervision and monitoring; the MOE had to approve the curricula of the institutions under other ministries;

After 1995, with the Rationalization of Post-secondary Education Project, all higher institutions (10) in Vientiane have been amalgamated to form a National University of Laos (NUOL) which is under the supervision of the Ministry of Education. The problems of administration, council, autonomy, finance, staff development, cost recovery etc. of NUOL as well as the role of the MOE are in the process of development with the assistance from international experts.

Types of Institutions

There are two types of higher institutions in Lao PDR:

1. State higher institutions:
   - National university which offers Bachelor degree and Diploma;
   - Teacher training colleges which offer Diploma;
2. Private colleges which offer Diploma and Certificate.

The statistics of Ministry of Education indicated that in Higher Education in 1996-97 there were 8,560 students (2,448 female), 1,156 teachers (401 female).

■ Higher Education Reform since the Adoption by the Government of the Transition Policy towards Market Economy

General Description of the Staged Experiences, Challenges and Opportunities

➢ Experiences

In order to address the issues of human resource development in a comprehensive manner, the Government established a high-level Steering Committee on Human Resource Development in 1994. The system's response to this policy thrust is the consolidation and rationalization of institutions, through which each institution improves co-ordination of programmes and promotes sharing of material and human resources to produce and reproduce well-trained human resource efficiently. Consolidation and rationalization is expected to bring about improved management and greater systematic efficiency as well as to formulate a network of competence to support each other.

With the assistance provided under the Asia Development Bank's PPTA, the Government formulated a long-term strategy to develop the post secondary education system by consolidating the subsector under the initiative of a national university to be established.

The rationalization of post secondary education will therefore be carried out through the establishment of NUOL and regional colleges.

During the period 1995-1997, all 10 higher institutions have been amalgamated and consolidated.

➢ Challenges

There are some challenges facing the rationalization project,. such as:

- the reluctance of some institutions to joint the National University;
- the delay in implementation of the project causing the waste and problems for the NUOL;
- the co-ordination between concerned parties in the implementation of the project
- the recognition of National University's curriculum by the universities in the region;

- the quality of higher education may not meet the requirement of the market economy;
- the participation of disadvantaged students and female students in University;
- the capacity to finance the university; etc

➢ **Opportunities**

There are some opportunities in the reform of higher education system, such as:

- the will of the Party and the Government to give priority in Human Resource Development,
- there are some qualified staff in MOE and NUOL who play the key role in the implementation of the project;
- the assistance of external organizations in the development of higher education in Lao PDR etc.

Legal and/or Fiscal Measures

So far the legal measures relating to the implementation of the rationalization of higher education are:

- the resolution of the Politic Bureau of Lao People's Revolutionary Party on Human Resource Development;
- the Decree of the Prime Minister on the establishment of NUOL;
- the Decree of Prime Minister on the creation of Council of NUOL and the appointment of the President and members of this Council; and
- Some decrees of the Minister of Education regarding the establishment of NUOL.

➢ **Relationship between the State and Higher Institutions**

NUOL will be an autonomous statutory body and it will be governed by its own University Council. Its activities will be coordinated and facilitated by MOE. In the process of NUOL development, MOE will provide necessary support in its administrative and managerial matters, but as NUOL gains its full capacity in administering its own affairs under the direction of its Council, MOE will gradually delegate and transfer the authority to NUOL to manage its own institutional affairs. MOE's role will then be changed from that of a direct administrator to that of a coordinating and supervisory body.

➢ Interactive relations with the World of Work

In the University Council there are the members which represent the productive ministries as well as the private sector of economy. So, in the development of NUOL the private sector are involve in all stages from the need analysis, the curriculum design, the participation in the teaching and research, the sharing of instructional material until the practice and employment of graduates.

➢ Government Policy and Institutional Income Generation

The main long-term objectives of the Government of Laos in higher education sector are the expansion and continuous improvement in the quality of education offered, in order that it meets the demands of socio-economic development. Based on studies conducted by UNDP, UNICEF and UNESCO since 1982, a sector study completed by ADB in 1989 and further analytical work undertaken by the World Bank to 1993, the MOE formulated an education sector strategy to the year 2000. The strategy gives priority to improving the quality and efficiency of primary and lower secondary education, in view of the social and economic benefits of investing in basic education, and the fact that middle and higher level training is most effective when built on broad competencies acquired through a solid foundation of general education.

The main objectives of the Government's education policy has been to improve the quality of education and the efficiency of education planning and management. This objective is reflected in the major reforms now in train with loan funding from the ADB and World Bank.

Concerning the institutional income generation, the Government has decided to ask for the students who have the possibility to pay the tuition fee. The NUOL cost recovery scheme would involve three major components:

- the introduction of tuition fees for full-time students;
- the introduction of common usage charges, e.g., library fee, Sports fee, parking fee, etc.; and
- the adoption of a personal or organizational user services fee to full and part-time students, members of the community, public and private organization, etc. (e.g., non-formal courses, continuing education, credit and non credit courses, student housing, food services, use of NUOL facilities and equipment by outside individuals or organizations, etc.

As part of the cost recovery scheme, University policy and procedures recognizing the need for the adoption of equity measures such as tuition waving, scholarship and loan scheme

would also be developed to provide disadvantaged students and groups with sufficient resources and opportunities for involvement and participation in the NUOL.

■ International Co-operation as a Strategy in the Reform Process

Linkage with Other Countries and Co-operation with Leading Institutions

As in other sectors, the Government of Laos has relied heavily on external funding to cover development expenditure in Education. There are currently a number of ongoing projects totaling approximately $85 million financed by 10 agencies including six bilateral and four multilateral sources. The major donors include ADB, the World Bank, UNICEF, UNESCO and the Governments of Japan, Switzerland, Norway, Germany, Australia and France. In addition, a number of governments and donor agencies are providing specialists in various educational institutions.

In order to compensate for the past absence of in-country university level facilities, a number of countries have donated scholarships offering young Laotians the chance to pursue university and other tertiary level education abroad. The major sources of these scholarships at present are China, Viet Nam, Australia, Thailand, Japan, France, Poland, etc.

Co-operation with UN Agencies

The danger of multi-source funding is lack of co-ordination in activities, duplication and even conflict resulting from differences in approaches. Considerable effort has gone into the planning of donor activities with the result that the programs of the major donors in these areas are well-integrated and form a clear, well-focused whole. More effective co-ordination and planning, however, is needed in the areas of higher education.

In view of aid co-ordination, the UNDP field office in Vientiane has provided assistance to the Government in the establishment of a computerized local area network (LAN) relating to the generation, storage and analysis of data on external assistance flows. UNDP has also provided assistance in the formulation of a system for aid programming, monitoring, reporting and overall co-ordination in order to ensure that programming of public investments is consistent with economic and development goals and priority.

UNDP has been assisting the Government in convening a series of round table meetings in Geneva every two years. The round table meeting has been an effective forum for the Lao PDR to engage its development partners in the dialogue on the former's development plans, policies, strategies, major programmes and projects. Through this forum, the Lao PDR takes the opportunity to indicate its external assistance requirements and priorities to the

donor community which in turn manifests its intentions in term of the magnitude and sector/thematic destination of its assistance in the medium-term.

The Government has decided to prepare, in close co-ordination with the Office of the UN Resident Co-ordinator, a Country Strategy Note (CSN), providing a vision and ambition for UN system co-operation with the Lao PDR Government up to the year 2000.

It has been agreed that UN system support will be targeted towards the national programmes and will be focused on human resources development and rural development.

Experiences and Lessons from and Expectations of Such Linkages and Co-operation

An important lesson learned from past development efforts in the education sector in Lao PDR is the need to place significant emphasis on the issue of institutional governance and management, as well as the institution's support and functional units.

Similar observations can be made concerning projects supported by other donor agencies. Although a number of educational institutions have been supported by various donors in the past, few of them have strong governance adequate to make efficient use of available resources. In designing an education project in Lao PDR and many other developing countries, it is usually essential to allocate a large share of the project budget to establish strong management and functional units to support educational improvement in a cost-effective manner. Such efforts tend to improve the sustainability of projects and provide a sound basis of further development.

Statistics of Students and Teachers in Higher Education Institutions in Academic Year 1996-1997 in Lao PDR

No	Institution's Name or Faculties	Students		Pre-course		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Teachers	
		Total	F	Total	F	Total	F	Total	F	Total	F	Total	F	Total	F	Total	F	Total	F
I	**National University of Lao Including Diploma Level**	7 808 1,370	2,142 125	530	105	2,547	653	1,576	482	1,459	396	1,341	375	228	55	108	50	929	329
1	School Foundation Studies	1,201	331	133	14	1,068	317												
	- Sciences option	611	125			611	125												
	- Literature option	457	192			457	192												
	- Preparation for abroad studies	133	14	133	14														
2	Faculty of Humanities	2,227	921	173	70	438	201	549	252	542	198	525	200					182	74
3	Faculty of Sciences	294	133					84	38	94	33	116	42					98	17
4	Faculty of Architecture and Engineering	1,592	135	224	21	432	48	344	30	331	34	231	9	30	3			287	67
5	Faculty of Medical Sciences	658	305					193	44	163	70	121	61	73	30	108	50	127	64
6	Faculty of Agriculture and Forestry	337	38			44	7	99	12	104	17	80	2					113	49
7	Faculty of Economics and Management	0	0															7	1
8	Faculty of Education	133	36					28	5	55	21	50	10					53	35
9	Faculty of Political Sciences and Law	1,366	243			515	80	279	61	170	23	258	51	125	22			57	8
II.	**Teacher Training Colleges**	752	306			285	110	198	86	269	110							227	72
1	Province Savanakhet	152	72			71	30	37	19	44	23							61	19
2	Province Champasak	200	99			62	21	54	19	84	29							52	17
3	Province Luangprabang	197	75			78	27	42	19	77	29							63	18
4	Province Vientiane (Bankeun)	203	90			74	32	65	29	64	29							51	18
	GRAND TOTAL	8,560	2,448	530	105	2,832	763	1,774	568	1,728	506	1,341	375	228	55	108	50	1,156	401

Remark: - School of Foundation Studies is first two years of National University
- Pre-course is the course for whom general education level not enough for entry into university
- From AY 1996-97 NUOL's system is 11 years (general education) + 2 years (foundation studies) + 3 years specialized (for Bachelor Degree)
- Before 1996-97 Higher Education System was 11 years (general education) + 3 or 4 years (for diploma) and + 4 or 6 years (for Bachelor Degree)

ED3 PIU Student's statistics 1996-1997

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Mongolia

Brief Report on the Higher Education Development of the Transition Period in Mongolia

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Before 1990 Mongolia had only social advantage and all of social activities was organized in the context of the centrally planned economy.

There were two sides of points on the higher education system: positive and negative.

■ Positives Side Under Old System were as Follows:

- As guaranteed by the Constitution and Education law every citizens had equal rights to have higher education free of charge;
- The higher education teachers had a high salary in comparison with others; and
- Those peoples who have a higher education diploma had a good salary.

■ The Negatives Were:

Curriculum contents of higher education was centrally planned, therefore it could not respond to the demand and interest of peoples.

- The students who were graduated from universities and higher education institutions were assigned by government to work in any place. There was no free choice for them to have their profession and to go any place where they wanted to work;
- The citizens wanted to have universities and higher education institution's diploma and certificates, because government took assigned them to the job depending on their diploma;
- Everything was centrally organized. Therefore the directors of higher education institutions did not have any autonomy to develop their curriculum; and
- The budget for higher education development came from State only, which was always insufficient.

The 1990 was a historical year. In Mongolia as a result of democratization of political power, a new government has been formed and a new economic policy started to be pursued.

As Mongolia becomes more democratic and open, the demand for higher education of all kinds will be increasing, including that for adult continuing education and special education. In the private sector, this increasing demand already is being demonstrated in the growing number of private institutions that have been established, mostly in Ulaanbaatar, in the past few years. In the transition to a market economy, the need for private, independent institutions of higher education that are prepared to respond to the demands of Mongolian for foreign language instruction, business management courses, etc. also have been increasing. This trend will be encouraged. Given more autonomy,

both public and private institutions of higher education will be provided with opportunities to develop new and more relevant curricula.

There was a need to change the key objectives of higher education. According to the democratic principal, the State policy on the education development was approved by the Parliament in 1995. The Higher Education Law was also discussed and adopted at the same time, and came into force from August, 1995.

The Education Act of 1995 has confirmed the main direction of higher education development reform from 1997 to 2005 in Mongolia in 1997. The Education Act says that a key objectives of higher education is to give to the citizens free and open opportunity to have higher education related to their ability and social demand, while enhancing the efficiency of higher education.

Measures to be taken for achieving the key objectives are as follows:

1. Higher education can be a vital force in Mongolia's development. It will become even more important as the society becomes increasingly technological and democratic, and as its problems become more complex. Highly skilled graduates and innovative research programmes are critical to the nation's future well-being.
2. The participation of the private sectors in higher education should be increased and supported and appreciated by the government because of their cost effectiveness.
3. Planning for higher education must begin by attempting to anticipate basic trends and responding to the challenge they present by establishing a clear set of policy priorities. The higher education content should be reformed and the credit hours system should be implemented in higher level institutions.
4. The higher education structure should be changed.
5. The students should pay the tuition fees to get higher education and higher education institutions should have the multi-source financial system.
6. The higher education institutions should have independent and decentralized activities.
7. The community participation of the management in higher education should be increased.
8. The indirect monitoring system should be established for looking for higher education activities.

At present, Mongolia has 7 public universities, 2 institutes, 10 colleges, approximately 50 private institutions. There are 40 thousand of students in both public and private institutions.

From 1990 all of students who are studying in public and private institutions started to pay the tuition fees. Therefore about 80-90 per cent of total expenditure of those schools come from the tuition fees and other additional income. But Mongolian government is responsible for the school accommodations, electricity and heating payments of public universities, institutes and colleges. The Mongolian government does not have any financial support for the private schools. The tuition fees of the students are main financial source of the higher education organizations.

From 1997 Ministry of Education together with Ministry of Finance have received the tuition fees of students. In 1997-1998 academic year, the directors of higher education institutions have right to decide their tuition fees themselves, according to their real expenditure. From that time the tuition fees have been increased rapidly. Due to that reason, some students who have a small income can not pay their tuition fees and do not have the possibility to get higher education. Therefore the government of Mongolia established the "State Loan Fund". For instance, approximately 30 per cent of all students who study in universities, institutes and colleges have possibility to get loan from the State Loan Fund in 1997-1998. On the one hand we have now the policy to increase 'State Loan Fund' step by step in order to give students an opportunity to get higher education. On the other hand, Ministry of Science, Technology, Education and Culture now implement the credit-hours system in fully thought, and to give them an ability to identify the credit-hours for year or semester according to their income.

Myanmar

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■ Background

The first University in Myanmar was University of Rangoon (now Yangon University) established during the later years of colonialist rule (1886-1947) in 1920. The fore runners of Rangoon University were the two colleges: Rangoon College (1884) (later successively known as Government College, University College) and Judson College (formerly known as Baptist College until 1918). Rangoon College was affiliated to Calcutta University and students had to go to India to carry on their university education before the existence of Rangoon University (RU). University education in those colonialist days was the exclusive privilege of the wealthy and many were in pursuit of 'Arts' often grotesquely combined with a single 'Science' subject, leading to B.A. degrees. Only a handful of pragmatic and modern minded went for medical and legal studies. Ardent nationalists criticized the then university education as a ploy by the colonialists to breed civil servants to prolong their rule.

There was outbreak of World War II leaving no exception to Myanmar for its ravages, followed by Japanese occupation. Rangoon University with its two colleges was closed down in 1943 and resumed in 1947. Myanmar became independent at the beginning of 1948. Education of youths was interrupted by war and very few were successful in immediate post war Matriculation examinations. Consequently student population in R.U. were in hundreds. The collegiate system in Rangoon University was abolished and RU was run on a unitary system with various faculties notably of arts, sciences, laws, engineering, medicine and forestry. However there was University College in Mandalay. Many Indians, hired from overseas, were among the various faculty members. Myanmars by culture and traditional teachings placed education very highly. "Education is a pot of gold which men could not snatched away" so the saying goes. Young men and women who were caught in the suspended days for educational pursuits during the war, soon catched up and the early signs of growth of university student population could be seen from the setting up of two colleges, one in Yankin (for sciences) and another in Hteedan (for arts) in 1954. They catered to freshers and for one academic year only. Mandalay University College too was upgraded as a university in 1958 to cope with increased student population.

Myanmar's higher education has undergone tremendous changes in terms of administrative structure, organization and number of institutions to cope with the ever rising student population and changing needs of the times. The most notable are the changes in 1964. They brought about the abolition of unitary university system. Separate institutes were established for medicine, engineering, economics and business studies, education and so on. There was also the carving out, over the years, of institutions under the Ministry of Education and placing them below ministries directly related to them in practice and application. Institutes offering courses in medicine and related disciplines were placed under the administration and control of Ministry of Health, engineering, technical and

vocational studies under Ministry of Science and Technology, agricultural studies under Ministry of Agriculture, veterinary sciences under Ministry of Livestock Breeding and Animal Husbandry, forestry under Ministry of Forestry and so on.

Myanmar language became the medium of instruction in higher education as another outcome of the changes in 1964. This continued until 1981 when English language was readopted again as the medium.

Major or significant actions in 1977 brought about the establishment of Regional Colleges. Successive authorities were aware of and have explicitly stated in the policy pronouncements that higher education is the preserve of intelligent and esoteric young men and women. It was also recognized that the nation needs large number of personnel with agricultural, technical and vocational qualifications. The regional colleges, set up in 1977, have eighteen or more vocational subject disciplines with practical orientations. But the tendency of students, even of mediocres better suited to vocations, to join universities remained. Regional colleges in the end had to be absorbed into universities. The increase in student enrollment of 62,046 in 1975-76 to 103,231 in 1994-95[1] (an increase of 66.38 per cent) representing annual growth of 2.6 per cent far over the population growth of around 2.0 per cent[2] could be seen as a testimony to this tendency of many students to pursue higher studies.

The market-oriented economic environment is undoubtedly congenial to development and reform process of higher education. The country's chief macro economic indicator, GDP achieving growth rates of 6-7.5 per cent[3] during the last three years, the growth of the private sector, despite only very modest scale of privatization of inefficient state economic enterprises and the liberalization and opening up of the economy with consequent inflow of FDI call for urgent and extensive reform and development process in higher education. This is most discernible in the business education field. Many private schools sprang up to fulfill the emerging needs: computer competency, English language proficiency and skills in business practices like bookkeeping, accounting and secretarial practices. Affiliations with foreign institutions for external qualifications[4] are ubiquitous and they signify serious warnings to universities and institutes (at present solely in state's hands and under direct

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1 Report to Pyithu Hluttaw (1975-76).
Review of Financial,, Economic and Social Conditions, NPED 1994-95.

2 1992/93 1.88 per cemt 1993/94, 1.87 per cent 1994/95, 1.87 per cent.

3 GDP gowth rates at 1985/86 constant producers' prices 1993/94, 6.0 per cent 1994/95, 7.5 per cent 1995/96, 6.9 per cent (provisional actual).

4 Various Diplomas off Cambridge University – International Diploma in Computer Studies (IDCS), International Higher Diploma (IHD) of National Computing Centre, NCC, U.K., Group Diplomas of London Chamber of Commerce and Industry (LCCI) Bachelor of Business Administration (BBA) of NZU, etc).

administration) that if the latter remain indifferent to the current needs and challenges, they would soon loose their significance and importance. The education sector particularly the higher education might need to consider adopting similar policies and measures as the liberalization and opening up of the economy.

Myanmar society is multiracial. It has 135 ethnic races besides the ones like Chinese and Indians of foreign origins. The major indigenous races are Kachins, Kayahs, Karens, Chins, Shans, Bamas, Rakhine and Mons. Bamas, the majority, constitute about 69 per cent of the whole population. These ethnic races are different in their stages of development. The most notable are those residing in frontier and border areas, primitive and backward in their values, beliefs, customs and cultures. State Law and Order Restoration Council (SLORC) Government has striving to correct this situation to the extent of setting up a distinct ministry - Ministry for the Progress of Border Areas and Development of National Races. Main religions professed by people of Myanmar are Buddhism, Islam and Christianity. Others like Hinduism, Judaism and Nats (Spirits) worship and Atheism are adopted by small minority. Religion also plays an important part in the determination of values, morals and attitudes including those towards education. Urban and rural residencies besides significantly making their impacts on access to higher education, also determine the outlook towards higher education. It is needless to state that urbanites better understand the life long all-round benefits of higher education and are also in better situations and positions to make good of this knowledge and understanding.

Myanmar society with 8.8 millions (m) in 15-24 age bracket, representing 19.3 per cent of the total population of 45.6 m. estimated for 1996[5], calls forth for reforms and developments of higher education. The absence of sex discrimination in Myanmar society in the provision of higher educational qualifications to the young also place greater responsibilities on the authorities. This is also an aspect where parents in rural and urban areas have different outlooks with those in rural areas giving more emphasis on educating their sons. But nowadays with the advent of better communications and transportation there is much less, if any, discrimination. When one examines the sex ratios in student enrollments as well as in faculty staff, it is quite alarming to find that the female proportions are quite high in students as well as in academic staff. As an instance, the respective ratios in Institute of Economics during 1996/97 academic year were 100:33 and 4:1 respectively. This scenario stands not only for IOE but was true and could even be worse in other institutions. The ratios of females to males among students in YU during 1996/97 academic year were 3:1 in respect of ordinary courses, 6:1 for honors, 9:1 for post grads and 18:1 for law courses respectively, as stated by its rector at a meeting on 2-9-97. It is thus a matter for serious consideration.

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[5] *Statistical Year Book*, CSO, 1995

■ Present Situation of Higher Education

The National Education System

The current educational policy is directed towards training and developing of personnel to suit the culture, traditions and customs of Myanmar society. It emphasizes on turning out intellectuals well cultivated in the principles and ethics of Myanmar society. The policy also recognizes education to be equated with livelihood but accepts both arts and sciences as long as they are equated with livelihood. Patriotism is also cited frequently to be inculcated in the minds of Myanmar youths.

Myanmar Naing Ngan Education Committee with State Law and Order Restoration Council (SLORC) Secretary (1) as the chairman, was formed in 1991. The chairman stated the following education policies at a meeting to celebrate the Diamond Jubilee of the University of Yangon.

- to enable each and everyone to have the right to basic education;
- to base education on high personal conduct and moral character;
- to promote and disseminate knowledge including science and technical know-how needed for nation building;
- to turn out skilled workers, technicians, experts and intellectuals who are loyal to the state and who will take part in nation building; and
- to train citizens to achieve all-round development.

Basic education is compulsory but higher education is meant for citizens with intelligence, industriousness, promise and potential. This has been and continues to be the stance of successive Myanmar authorities in their educational policy.

Myanmar education, as many others, is comprised of basic and higher tiers in both traditionally or generally accepted fields of education as well as in vocational studies. Basic education lasts for a total of eleven years: 5:4:2 in primary, middle and high schools. Students begin schooling at the age of five and finishes basic education (Basic Education High School (BEHS) examinations or Matriculation in a sense) by sixteen if he or she passes through the system without either dropping out or failing at any level. There are agricultural, technical and vocational schools at basic education level. Such schools where students carry out their studies after the completion of primary education are: Handicraft Schools, Schools of Fishery, Machinery Repair and Maintenance Schools, Evening Trade Classes and Schools of Home Sciences. There are also Agricultural High Schools, Technical High Schools; Commercial Schools and Engineering Technology Evening Classes to which students can join after completing middle education.

BEHS examination results are announced in two lists, 'A' and 'B'. Students passing on 'A' list proceed to universities, professional institutes and colleges. But option to join vocational and technical stream is also kept open to them. There are professional institutes of: Education, Economics, Paramedical Science, Nursing, Pharmacy, Agriculture, Computer Science, Veterinary, Technology, Dental Medicine, Forestry and Medicine. For the general or rather non-professional higher studies, there exist Workers' College, Arts and Science Universities, Degree Colleges, Two-year Colleges and University of Distance Education. The duration of studies in professional institutes, universities and colleges for Bachelor or First Degrees varies from 4 to 7 years with the exceptions of 1 year (2 years by correspondence) at Institute of Education and 2 years at Two-year Colleges (Appendix 1).

Courses offered at professional institutes and universities are for Bachelors (for undergraduates), Diplomas and Masters (for post graduates) degrees. But among the Arts and Science Universities, Yangon University, the oldest institution of higher learning which celebrated its Diamond Jubilee (75th year of its founding) in 1995, not only offers courses for the largest number of subject disciplines at Bachelor and Masters' level but is also the sole institution at present which offers courses in nine subject[6] fields at doctoral level. But among the professional institutes, Institute of Medicine and Yangon Institute of Technology have begun doctoral programmes. The Institute of Economics has also the Ph.D. programmes in the drawing boards (Appendix 2 and 3).

Students who finish BEHS on 'B' list can pursue their agricultural, technical and vocational studies. There are Technical Teacher Training Institute (1 year of studies), Government Technical Institutes (GTIs) (3 years), State Agricultural Institutes (3 years) and Commercial Schools (1 year).

Administrative Structure of Higher Education

Institutions of higher learning are under the jurisdiction of the state. Although they are spread under various ministries and not centralized under the education ministry, universities and professional institutes are not autonomous bodies.

Department of Higher Education directs and monitors all the arts and science universities and the two professional institutes viz. education and economics under the Ministry of Education. Besides universities and institutes, there also exist auxiliary departments like Universities Historical Research Centre, Universities Central Library, Universities Printing Press, Universities Translation and Publication Department, Applied Geology Department

[6] Myanmar, History, Geography, Geology, Physics, Chemistry, Mathematics, Botany, Zoology. Preparations are being made to offer PhDs in Philosophy, Psychology and Industrial Chemistry.

and Myanmar Educational Material Equipment Centre under Department of Higher Education. There are four other departments at the same directorate level as the Department of Higher Education, namely Department of Basic Education, Myanmar Examinations Board, Myanmar Education Research Bureau and Myanmar Language Commission under the Ministry of Education (Appendix 4).

These five departments function under the following bodies:

- Myanmar Naing Ngan Education Committee
- Universities Central Council
- Council of University Academic Bodies
- Basic Education Council
  - Basic Education Curriculum, Syllabus and Text book Committee
  - Teachership Education Supervision Committee
- Education Research Policy Direction Committee

Other ministries and professional and/or educational institutes over which the former have jurisdiction are:

Ministry of Health

- Institutes of Medicines
- Institute of Dental Medicine
- Institute of Nursing
- Institute of Pharmacy
- Institute of Community Health
- Institute of Paramedical Sciences

Ministry of Science and Technology

- Institutes of Technology
- Institute of Computer Science and Technology

Ministry of Forestry

- Institute of Forestry

Ministry of Agriculture and Irrigation

- Institute of Agriculture

Ministry of Livestock Breeding and Fishery

- Institute of Animal Husbandry & Veterinary Science

Ministry of Co-operatives

- Central Co-operative Degree College
- Regional Co-operative Colleges

Ministry of Culture

- University of Culture

Public Services Selection and Training Board – SLORC

- University for Development of National Races
- Central Institute of Public Services

Ministry of Defense

- Defense Services Academy
- Defense Services Institute of Medicine
- Defense Services Institute of Engineering

Types of Institutions

It is apparent from the presentations so far that institutions of higher learning cover broadly arts, liberal arts, humanities, sciences, technology and medicine. It could also be observed that the title 'University' is adopted for institutions of learning in classical, or traditional disciplines whereas 'Institute' is used for those engaged in professional studies.

The use of different titles as such, universities and institutes, is in a way, an outcome of the restructuring of higher education system in 1964. The unitary system of university education with faculties of arts, social sciences, sciences, engineering, education and medicine, etc. was abolished and separate institutes were established for the professions. The then Revolutionary Council sent education delegations to Eastern European Socialist nations and the titles, I suspect, resulted from models of Institutes in the latter nations. They remain unchanged up to the present. Anyhow, a university or an institute functions under the administration of a rector, pro-rector and head (administration), heads/ professors of academic departments successively under the rector. The hierarchy in an academic department continues with associate professor, lecturers, assistant lecturers and with tutors at the bottom (Appendix 5).

Each university or institute has an Administrative Board and an Academic Council to advise the rector. These two organs are chaired by the rector and consist of professors and heads of departments and also personnel outside the institution as members. Each academic department has also its own Board of Studies, comprised of senior academic staff and members outside the department and institution.

There are altogether 55 institutions in higher education in Myanmar during the academic year 1996-97. They are all located over the whole of Myanmar. Every state and division, with the only exception of Kayah, has an institution of higher learning within it.

The number of staff, students and other pertinent data in institutions under the MOE and other Ministries in 1996-97 academic year are as follows:

	MOE	Per cent	Other Ministries	Per cent	Total	Per cent
Number of staff	13,921	88.89	1,740	11.11	15,661	100
Number of students	346,839	94.58	19,869	5.42	366,708	100
Number of Institutions before SLORC i.e Sept. 88	14	56.00	11	44.00	25	100
Established during SLORC era	17	56.67	13	43.33	30	100
	31	56.36	24	43.64	55	100

Source: Department of Higher Education

The ratio of academic (5,355) and administrative (8,566) staff (total 13,921) in institutions under MOE is (1:1.6) and that of male (130,081) to female (216,758) students (total 346,839) in the same institutions stands at (1:1.7). Both these ratios, in my opinion, are calling the attention of responsible persons in higher education. But it is also worth noting that SLORC Government has managed to set up institutions of higher learning during its 8 years so far (1988 Sept. to 1996) exceeding even the total number in the entire history before its reign. The SLORC is highly laudatory for these efforts.

■ Higher Education Reforms Since Adoption of Market Oriented Economy

Stages Experienced, Challenges and Opportunities

The most notable of the higher educational reforms during the time so far of SLORC is the action taken to make all the states and divisions, especially states belonging to the national races accessible to higher education. Arrangements have been made and a college is to be

opened during the coming 1997-98 academic year in Kayah State, the only state at present without an institution for university education.

Another significant reform measure makes higher education available to broad masses. The establishment of a distinct University of Distance Education (UDE) enables students all over the country to pursue arts, pure sciences and economics at their own pace from their homes. For those who are employed, they now have the option to be enrolled at UDE instead of attending at Workers Colleges. It is true that Myanmar has the university correspondence courses before but UDE can be seen also to have upgraded them. Of the (346,839) students in (31) institutions under MOE during 1996-97 academic year, there are (197,494) students in UDE constituting 56.94 per cent. The setting up of UDE, in addition to availing higher education to wider sections of the people , also economizes the scarce resources as the staff of UDE (1,258) represents a mere 9 per cent of total staff of (13,921) in (31) institutions of higher learning under MOE.

There have also been expansion and upgrading of universities and colleges in higher education. As an example, Institute of Foreign Languages, Sittwe, Pathein and Monywa degree colleges were upgraded to universities; Pye and Meikhtila colleges to degree colleges; branch campuses of Yangon University in Botataung, Hlaing and Kyeemyindine and Yadanarbonni Mandalay University to colleges respectively in 1996/97.

Government expenditure on education in 1987-88 of K 1,290.5 millions is increased to K 6,772.0 millions in 1995-96, both at current prices, representing over 5 fold (5.29) increase.

Detail Composition at Respective Years

(Kyat millions)

	Current		Capital		Total	
1987-88	1,080.6	1.00	209.9	1.00	1,290.5	1.00
1995-96*	4,582.7	4.24	2,189.3	10.43	6,772.0	5.25

*Provisional actuals

Source: Review of the Financial, Economic and Social Conditions 1997

The detail composition reveals even more promise as the capital element can be found to increase by over 10 folds (10.43). But these two educational expenditure level in constant terms after adjustment for inflation (at 85/86 constant producers prices), show a decrease from K 998.94 m to K 748.44 m by K 250.5 m. The educational expenditure as a percentage of GDP also showed a decline from 1.88 per cent in 1987-88 to 1.12 per cent in 1995-96 (K 1,290.5 out of K 68,698.4 (1.88 per cent), K 6,772 out of K 603601.8 (1.13 per cent).

There were also reforms directed towards adopting to the market oriented economic system of the country. The political science, a compulsory subject throughout all years of all programmes, in all institutions – arts, sciences and professionals – bent towards socialist ideology of Burma Socialist Programme Party was dropped out from the curriculum. Curricula and syllabuses at the universities, colleges and institutes were reviewed and revised to give new dimensions of the economy. An MBA programme was introduced at the Institute of Economics, beginning from 1995-96 academic year.

Higher education in Myanmar is faced with a number of challenges. An important one is that private sector and overseas employment opportunities are pulling away teaching staff from universities and institutes. The total number of teaching staff at institutions of higher learning in 1987-88 of (6,251) was maintained at (6,260) in 1994-95. Despite the pull of the domestic private sector and overseas organizations, the Ministry of Education has successfully met this, as the number of staff has even increased to (8,382) in 1996-97.

The other challenge is the decreasing interest of males in higher education as reflected by dominant female to male sex ratios among the students as well as the teaching staff. Pay and privileges of university staff members and incomes of graduates are not attractive enough. This applies to all personnel employed by the state.

Private schools and academies have sprang up in the market-oriented economic era. During the early days after their establishment, they cater to the immediate and practical needs of the transformed economy. But as these have increasingly being met and also because of the frequent suspension and closures of universities, the private centers have begun to affiliate with overseas institutions and offer foreign degrees, diplomas and qualifications. This, in my opinion, is a serious challenge to the credibility and wide acceptance of local qualifications. As advocated earlier elsewhere in this paper, state institutions of higher education could not afford to take an indifferent stance. They could collabourate with reputed overseas colleges and universities and operate towards joint degree programmes and schemes. In this connection, the existing higher education system especially its year end examinations heavily relying on rote learning rather than analysis, appraisal, critique and application is also to be under careful scrutiny. This kind of shifted focus in tests and examinations, demanding independent thinking, could also be expected to bring some solutions towards the prevalence of tutions in higher education.

The enormity of the challenge to higher education posed by growing student population could be drawn from the following statistics of students appearing for BEHS examinations, the number successful and the first year intakes at universities, colleges and institutes in 1987-88, the year just before SLORC, and 1994-95.

	Students Appearing in BEHS exams		Number Successful		First Year Intakes	
1987-88	217,193	1.00	42,100	1.00	12,072	1.00
1994-95	357,129	1.64	81,078	1.93	76,716	6.36

Source: Myanmar Education Research Bureau (MERB)

Legal and/or Fiscal Measures taken

Higher education was formerly regulated by the University Education Law of May 1964. This law was the result of a number of seminars, carried out to lay down policies and formulate ways and means of implementing the Revolutionary Council's[7] beliefs in higher education. The beliefs could be succinctly stated as (1) education equated with livelihood (2) basis of socialist moral values in education (3) higher education for those with promise, potential and industriousness and (4) precedence of science. Based on experiences obtained by implementing the new education system, Union of Burma University Education Law 1973 was enacted under the Revolutionary Council Law No. 13 of 1973, which repealed the University Education Law of 1964. In 1983, Pyithu Hluttaw (Parliamentary) Edit Number 4 and in 1989, Proclamation Number 19/89 of SLORC made amendments to the 1973 University Education Law.

The changes in legislation do not however basically change the relationships between the state and institutions of higher education. It is true that some professional institutes are placed under the administration and jurisdiction of various ministries. But the two supreme organs, Universities Central Council and the Council of University Academic Bodies exist to co-ordinate, if not to centralize, the institutions of higher learning. The state maintains its hold on these institutions and no private university has been allowed to exist in parallel with state institutions so far.

There are labour exchanges under the Ministry of Labour. Myanmar still do not have private employment and placement agencies, even though one, under the name of "Than Enterprises", attempted to establish without success in the early transitional days (1991). The interaction between state labour exchanges and universities, colleges and institutes could be said as none. But employers, state as well as private, usually insist applicants to hold at least a first degree even for their clerical appointments. Some employers, especially those in the private sector, approach universities, colleges and institutes in their recruitment to get outstanding graduates. Private banks and enterprises quite recently have begun to grant scholarships and stipends to those with good scholastic performances with a view to ultimate employment in their organizations.

[7] Revoluntary Council came to power on 2 March 1962 by a coup d'etat.

Interactions with the world of work exist in professional institutes in the form of compulsory internships at state hospitals for medical students, required training at available work establishments and offices for engineering and business studies, etc. Undergraduate students, leave alone post graduates, at Institute of Economics are required [illegible] represent direct interactions.

Representations on the two supreme organs specifically by Deputy Ministers of various ministries on the Universities Central Council and Director–Generals of departments under various ministries on Council of University Academic Bodies could be looked at as indirect interactive relations between the institutions of higher learning and the world of work. Moreover these interactions are carried over to micro levels as well by the composition of members from the world of work in the academic councils at university and institute levels and in boards of studies at subject discipline departmental levels. Requirements in the curriculum and feedback on their relevance in the jobs are voiced in the discussions and deliberations of respective council meetings.

Successive governments in post independent Myanmar have not perceived institutions of higher education under their jurisdiction as agents of revenue generation. The fees charged at universities, colleges and institutes have always been nominal, up to the present. Institutions were being run and operated on state budget allocations. This is probably due to the values placed on education by Myanmars and as a consequence the desire of governing authorities to continue assuming the benevolent and paternalistic figures, in the traditions of Burmese kings. This is also understandable as governments in Myanmar wish to command respect and get affection from their citizens.

University Education Laws in Myanmar, give priority to equal access by the rich as well as the poor. Authorities have always been apprehensive that intelligent and promising young men and women would be prevented from pursuit of higher learning for lack of resources. They fear also that the nation would be deprived of contributions from brilliant scholars in the nation building tasks. This type of subsidy in higher education, in the perceptions of authorities, serves dual purposes. It takes care of equity as well as meritocracy.

The fees charged by private institutions for courses geared towards diplomas, professional qualifications and university entrance qualifications (foreign) are phenomenal (K 200,000-K 300,000) compared to existing local university fees (K 300-400). There is currently some sort of lobbying to hike the fees charged at universities. Authorities and rectors at institutes, particularly those under Ministry of Health and Ministry of Science and Technology are floating the idea of "tuition fee hikes" for courses offered at their institutions. This could be seen as following the practice started by the Institute of Economics (IOE) with regard to their MBA programme. IOE charges K 5,000 for a

quarter and there are three quarters in each academic year of the two year MBA programme. Even this fee appears to be negligible compared to about K 100,000-K 150,000 incurred for a 3 months English Language course run by private schools. There is, thus, a big opportunity for institutions of higher education to generate income and reward their academic staff deservedly.

■ International Co-operation

Linkages with Other Countries

Myanmar is linked with other countries through her scholars sent abroad for training and further studies. But these appear, from the numbers in hundreds for the country as a whole, to be nominal. There were (549) and (830) scholars sent abroad in 1984 and 1993 respectively.[8]

Not all the scholars sent abroad in each year work towards higher degrees. Many of them were sent for training for periods of less than 12 months. This is borne out by the (284, including 111 Ph.Ds) foreign degree holders (5.6 per cent) among the total of (5,057)[9] academic staff members in institutions under the Department of Higher Education (DHE), MOE in 1990.

This form of linkage is, at the moment "one away" - mostly from Myanmar to overseas and the reverse flow is very scanty and negligible.

The linkage with other countries also take the form of participation in workshops, seminars and symposiums held overseas as well as in Myanmar. After the opening up of the economy Myanmar increasingly hosts joint seminars with foreign counterparts. It is encouraging to find various ministries active in these matters. But perhaps as a legacy of the isolationism under the socialist era, 1962-1988, faculty and student exchanges and other forms of collaboration of universities, colleges and institutes of higher education with foreign institutions are still non-existent. The relations between higher educational institutions in Myanmar and foreign universities are on ad hoc basis.

Co-operation with UN Agencies

Myanmar has representative offices of chief UN Agencies – WHO, UNICEF, UNDP, UNESCO, FAO etc. The programmes and activities of these agencies were so far in basic education. UNDP has, in collaboration with Department of Basic Education (DBE),

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8 *Statistical Year Book*, CSO, (1993)

9 DHE

carried out "Access to Primary Education in Rural areas" and "Improving the Quality of Primary Education" in eleven townships. In has also in 1995-96 assisted Department of Technical, Agricultural and Vocational Education in running vocational classes in border regions. UNICEF has also carried out the project "All Children in School" in 44 townships with DBE.

UNDP had a project "Strengthening of Institute of Economics" in the late 1980s. But it was not implemented and there are no on-going projects with universities, colleges and institutes. The form of co-operation which have taken place in the past few years were paper reading sessions sponsored jointly by a UN Agency and a university or an institute and even that occur seldom nowadays.

Co-operation with Lending Instituitions

The world's and regional lending instituitions – World Bank, IMF and ADB – co-operated with the instituitions of higher education by award of scholarships for further studies overseas and grant of projects for specific studies. As the major interests of the lending instituitions were in the fields of economics, the beneficiary in Myanmar is most often the Institute of Economics (IOE) under DHE. But IOE has so far only a few scholars who were sponsored by WB, IMF and ADB IOE has carried out studies, like "Economic Reforms of Myanmar" in 1992 at the request of ADB and more projects are also expected to be in the pipeline.

Experiences, Lessons and Expectations of Linkages and Co-operation

Institutes of higher education, (noticeably Institutes of Medicine, Institute of Economics and Institute or Education) have held seminars, workshops and paper reading sessions under the auspices of UN Agencies, foreign universities and NGOs. Universities, colleges and institutes have also participated in such gatherings of academics, technicians and experts held jointly by departments under other ministries. IOE, for instance have, in the lest few years held seminars jointly with Centre for Pacific Development and Training, Australia, Nanyang Technological University and Ngee Ann Polytechnic of Singapore and UN Population Fund etc. Valuable experiences were gained and exposures received from such joint sponsorships. Directorate of Trade, Ministry of Commerce, Departments (like Planning and Central Statistics Organization) under National Planning and Economic Development Ministry, Central Bank of Myanmar under. Finance and Revenue Ministry were active in the holding of joint seminars with foreign organizations. These organizations have been considerate to invite IOE's participation from which IOE teaching staff have benefited.

Scholars have been sent from among the teaching staff of the universities, colleges and institutes of higher education mostly to England and America (1948-1962). Eastern European Countries (1962-1970) and to Western Europe (particularly FRG, Italy, Netherlands), Australia and Japan (1980s). In recent years, IOE's academic staff have been sent to Institute of Social Studies, Netherlands, Universities in Germany (FRG), Institute of South East Asian Studies, Singapore, Institute of Developing Economies and Centre for Population Studies of Japan, etc.

Almost all the present leaders (rectors) of universities, colleges and institutes are foreign trained and around 70-80 per cent of them are trained in the west. One would not be surprised if the future leaders come out also from among the scholars who had training abroad.

The history of Myanmar is replete with bitter experiences and hard lessons from seclusion and isolation from world community. Myanmar monarchs around the turn of 17th century and the beginning of 18th were inward looking and blind to external events. During the Konebong dynasty of that period in history, scholars could have been sent and not only could there be progress in science and technology but the aristocrats of the day would have been better skilled in the subtleties and intricacies of diplomacy. Many foreign, mostly British and European, travelers came to Myanmar but few Myanmars went and looked around the world. The then Myanmar fell easily to the plots of worldly experienced British.

It happened again in the years 1962-1988 when the country trod the isolationist path, this time in the management of the economy. It has now become an affair of the past which many would not like to hear and entertain. Our neighbours have overtaken us in economic growth and development.

We need to be abreast of advances in knowledge, technology and sciences taking place around us. This is an age of globalization in social, political and economic affairs. We need friends and partners in the region. That could only be achieved obviously through linkages and co-operation.

Russian Federation

Information of Russian Universities on the Threshold of the 21st Century

Dr. Vladimir I. Kurilov
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Ministry of Foreign Affairs

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Any attempt to look into the future, analyse the main trends of the development of education and human civilization in the 21st century makes us recall that many centuries ago, from the first steps on the path of knowledge, people had to find ways to preserve, select, systematise and communicate information. From ancient Greeks, Egyptians and Assyrians, our ancestors by petroglyphic drawings, cuneiform, hieroglyphs, letters and other means tried to preserve their world experience and communicate it to future generations. The process of knowledge accumulation, formation and development of sciences, spiritual and intellectual life contributed significantly to the progress of humanity, the laws and orders of the existing civilizations.

The most essential parts of education and science came from the ancient times. Undoubtedly, the book was the first great stage of the information revolution. It has become the basis of the mass education, acknowledged not only by philosophers but also by politicians who realised the powerful influence of public education on the fates of nations. The further development of the information era gave us typewriter, telephone, telegraph, radio, television, computer and modern surface and satellite communications facilities.

Information science is an integral part of scientific knowledge that collects, preserves, processes, communicates and uses information. The development of theoretical and applied information science has become a most important and significant factor in modern education and science. It is the informatization of education which offers real opportunities to create a global open system of education.

In the nearest future, the world's communication capacities are expected to undergo revolutionary changes in speed, reliability and security. According to the research conducted by the International Telecommunication Union (ITU), the annual growth rate of the services rendered at the world market of information technologies, including digital communications, computer production, etc , exceeds 20 per cent.

The emergence of the INTERNET has become one of the most significant event of the past ten years. It is the scope of INTERNET application that indicates information capabilities of a country, city, or institution.

In modern Russia, the establishment of educational information networks is to provide access to the world information system, the modern information superhighways and the international databases in the fields of education, sciences, industry, culture, health care service etc.

The most natural and effective way of entering the world educational system is to provide the educational institutions of Russia with access to the INTERNET. In this regard, the establishment of RUNNET (Russian Universities Networks federal system has become one of the major project realized.

The RUNNET system has been developing on the basis of a key federal network which directly interconnects tile most important economic regions of our country. This key network operation is provided with its field units located in major centres of education and research or been Russia *(see chart 1)*. One of these units (Far Eastern State University RUNNET Centre) has been opened in 1996 is successfully operating in Vladivostok, in FESU.

RUNNET traffic facilities guarantee high-speed transfer of information through modern communication networks which include satellite programs, surface fibre optic cables, and radio relay systems. Taking into consideration a distant location of our cities from each other as well the lack of highly developed RUNNET digital communications, we are currently creating our own high-speed traffic system *(see chart 2)*.

Tile federal network units are equipped with Russian-made surface stations, namely *Cedar - M* and *Kalinka*:

Cedar - M	antenna diameter	4.8 m
	amplifier output power	IOOW
	communication speed	2 x 2048kb/sec
Kalinka	antenna diameter	3.5 m
	amplifier output power	40W
	communication speed	512 kb/sec

At present, FESU RUNNET Centre is developing some new information services in addition to the existing INTERNET services, namely:

- information service and academic news;
- electronic libraries systems;
- universities data systems;
- distributed publishing systems;
- telecommunications and distance education, etc.

The first few months of the FESU RUNNET Centre's work have shown how eager our students and faculty members are to participate in historically significant events of the present and the past, visit the most famous museums and cultural centres, the most remote and geographically interesting places of the world without leaving their classrooms. The instructors not only improve considerably their informational skills, but also have a unique possibility to communicate with their colleagues almost all over the world. RUNNUET allows perfect facilities to professional communication, conducting of joint research and teaching and methodical work, exchanges of educational materials, computer programs and other information.

The project is sponsored by the Government of the Russian Federation. The realization of the second project of telecommunications development in universities of Russia started in 1996. This project has resulted through the agreement made between the Government of the Russian Federation and the Soros Foundation. Under this programme, Internet centres will be established in 32 Russian universities to provide students and faculty members with access to the INTERNET facilities. The Soros Foundation has allotted about $20 million to provide the centres with the necessary equipment, while the Government of the Russian Federation has contributed $30 million to cover digital communications expenses. Besides, during the next five years The Soros Foundation is planing to spend about $80 million to fund regional projects in the field of the humanities where the INTERNET capacities are applied.

The first field INTERNET centres were opened in June, 1996 in Yaroslavl and Novosibirsk. The third centre of this kind was established in the Far Eastern State University on October 28, 1996 (*see chart 3 - Tile structure of the Centre*). The establishment of this Centre has become a great event for our university and academic community.

At present, the INTERNET system is easily accessible to more than 9,000 students, faculty and staff members. That means that today the Far Eastern State University is the only institution of higher learning in the vast territory of Russia east of Novosibirsk, which administers two local telecommunication systems with their "gateways" to the world communication and information networks in Moscow and St. Petersburg. Within the framework of the RUNNET project, an additional "gateway" to the INTERNET is to be installed through the FESU telecommunication centre.

Considering the Far Eastern State University a major institution that in many ways influences cultural, social, and economic growth of the region, the Ministry of General and Professional Education of Russia has authorised our university to perform the functions of a leading organization in developing distance learning system in the Russian Far East. We have had a good experience in conducting video-conferences with the universities of the USA, Canada, Australia, and other countries. The conferences as well as other activities in telecommunications development give us hope that the Far Eastern State University will enter the 21st century with a new quality of education.

The federal program of the development of distance learning system in Russia has been worked out since 1995. The demand for distance learning in Russia is equal to the demand for full-time education. 1.5 million students are enrolled in distance educational programs every year.

Besides, according to the evaluation made by the Federal Service of Population Employment, about 2 million Russian specialists have to be refrained annually. People

have to alter their profile because of the closing of enterprises, forced migration of population and other causes.

Russian-speaking population in foreign countries may become one of the major consumers of distance learning system. According to some estimates, people living in foreign countries show great interest in Russian centres of distance learning.

Distance learning system is being created like a unified one, which means the following:

- unity of organizational, teaching and methodical and other principles;
- establishment of state and regional centres of distance learning (FESU is one of them);
- creation of a federal data bank that would contain the description of the courses available through the whole distance learning system. This bank should have common certifications author, teaching and methodical support, available through telecommunications nets of educational recourses; and
- setting up of a Russian University of Distance Learning (Extension University), that would integrate recourses of many educational establishments of all forms of property included into the distance learning system.

The graduates of the higher learning establishment which are the members of the Russian University of Distance Learning will get the Diploma of Higher Education of Russia.

The Far Eastern Slate University being the regional centre of Distance learning, system in Russia conducted first trials of video conferences with universities of USA, Canada, Australia and other countries. The results of these conferences indicate that by this time we can speak about reality of creating a global system of Distance learning allowing on the basis of new information technologies to provide with the effect of direct communication between instructors and students irrespective of the distance between them.

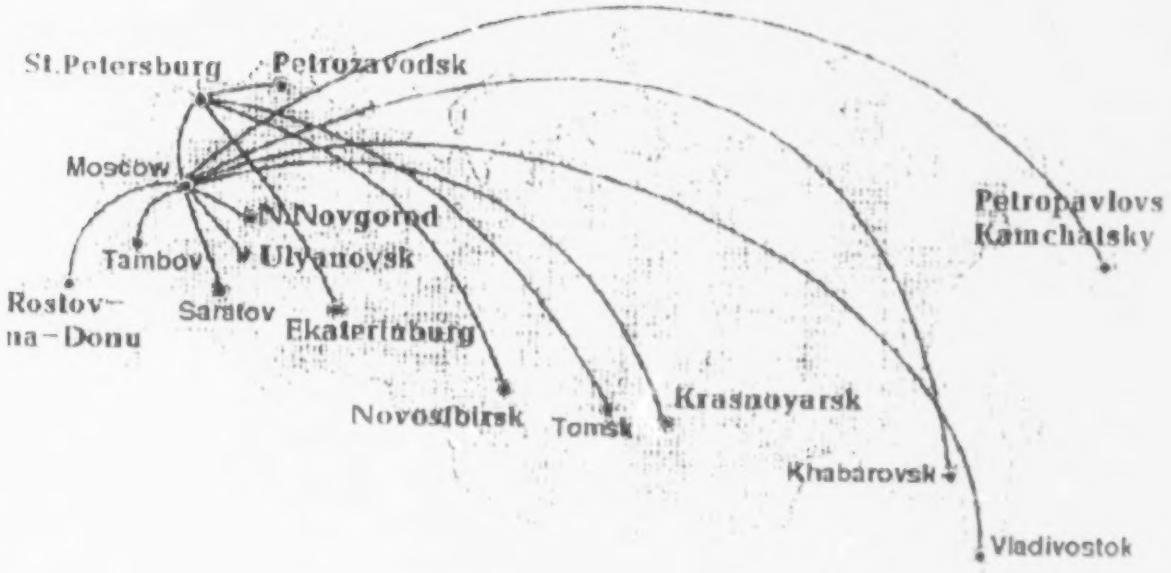
In FESU has created and now is operating the virtual Internet-library with possibility of access to texts both in on-line and off-line modes. There is an electronic catalogue of university library and regional library of Primorye (A.M. Gorkogo). The programs of distance learning are worked up. The following courses are in process: "The programming languages", "Numerical methods" and "The analyse of pictures".

In conclusion, I would like to note that development of national systems of distance learning will eventually integrate them into a global educational system. To hasten these important natural processes of evolution of world educational community in Asia Pacific region, we propose to create in an international distance learning centre that would be based in our university. Inviting to the co-operation in this direction we realize that effective ways of integration into world information- educational community involve intensive exchange of information materials, training of specialists, working out of

international educational programs and systems, co-ordinating of international lessons, holding of conferences, seminars, schools, and working meetings.

Considering the internationalisation of education one of the main principles of its development, the Far Eastern State University will play its role using the possibilities of international co-operation for the forming of a global educational medium, raising the level and quality of education, strengthening mutual understanding between nations inhabiting the Asia Pacific region of the 21st century.

Federal Centres of Russian Universities Network (RUNNET)



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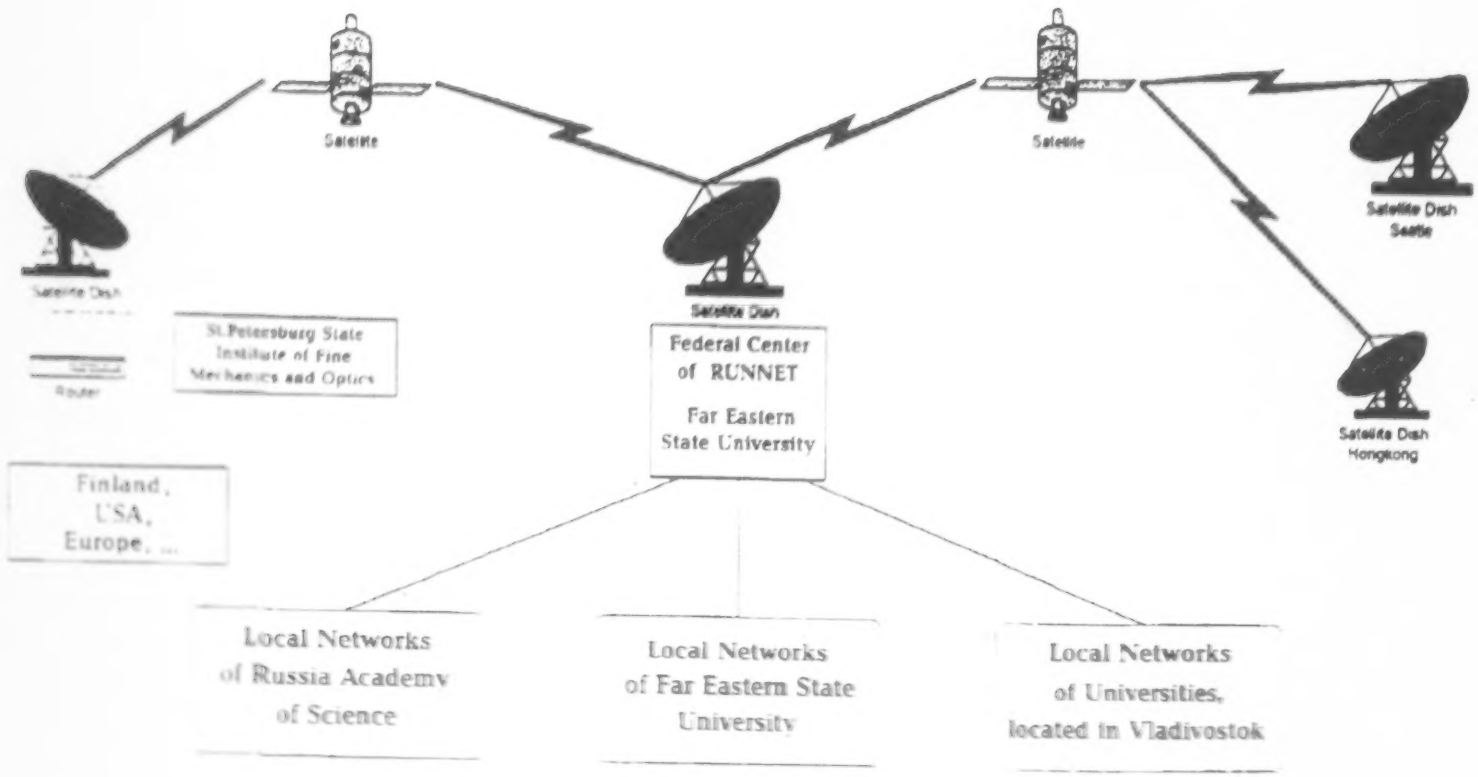

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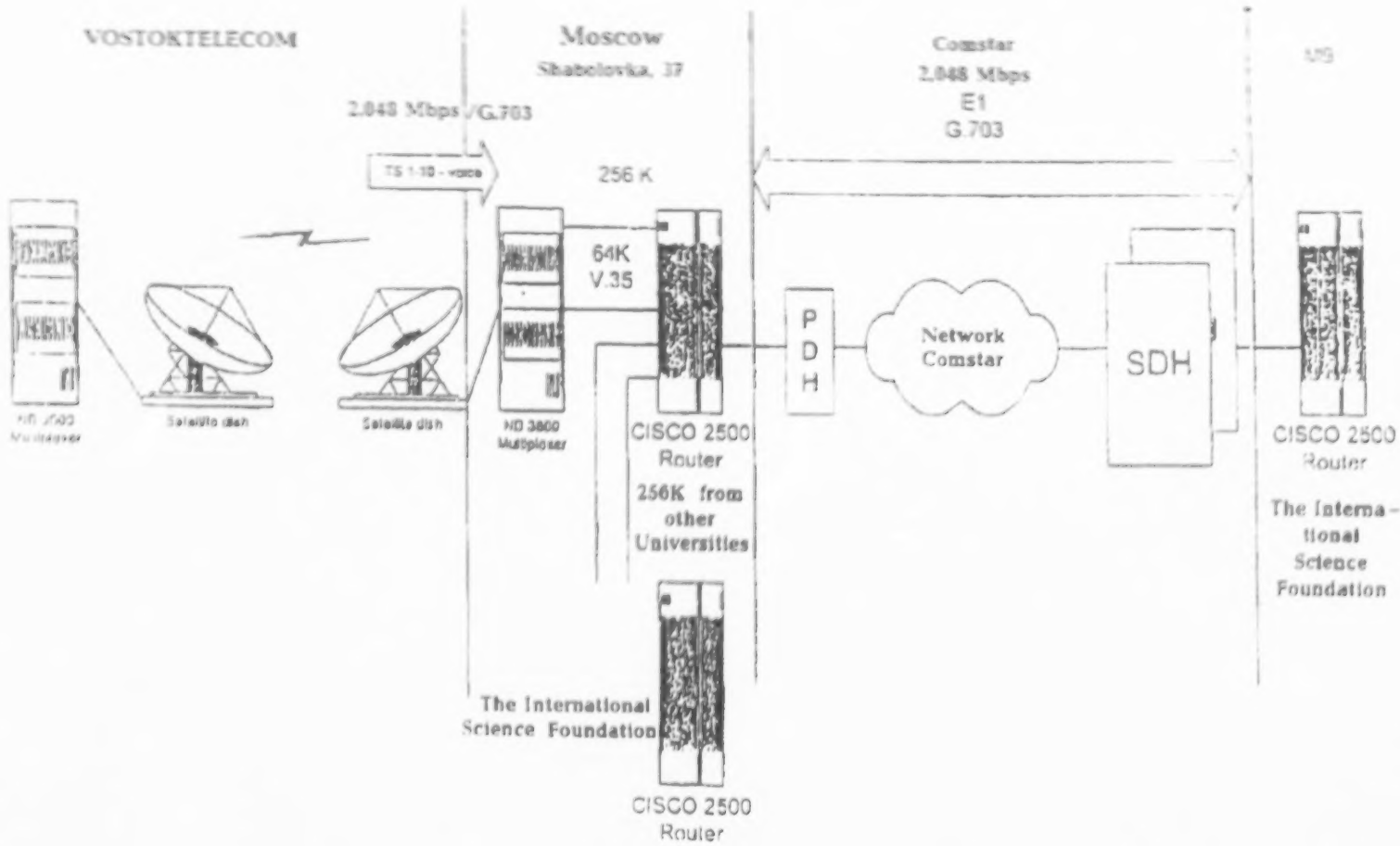

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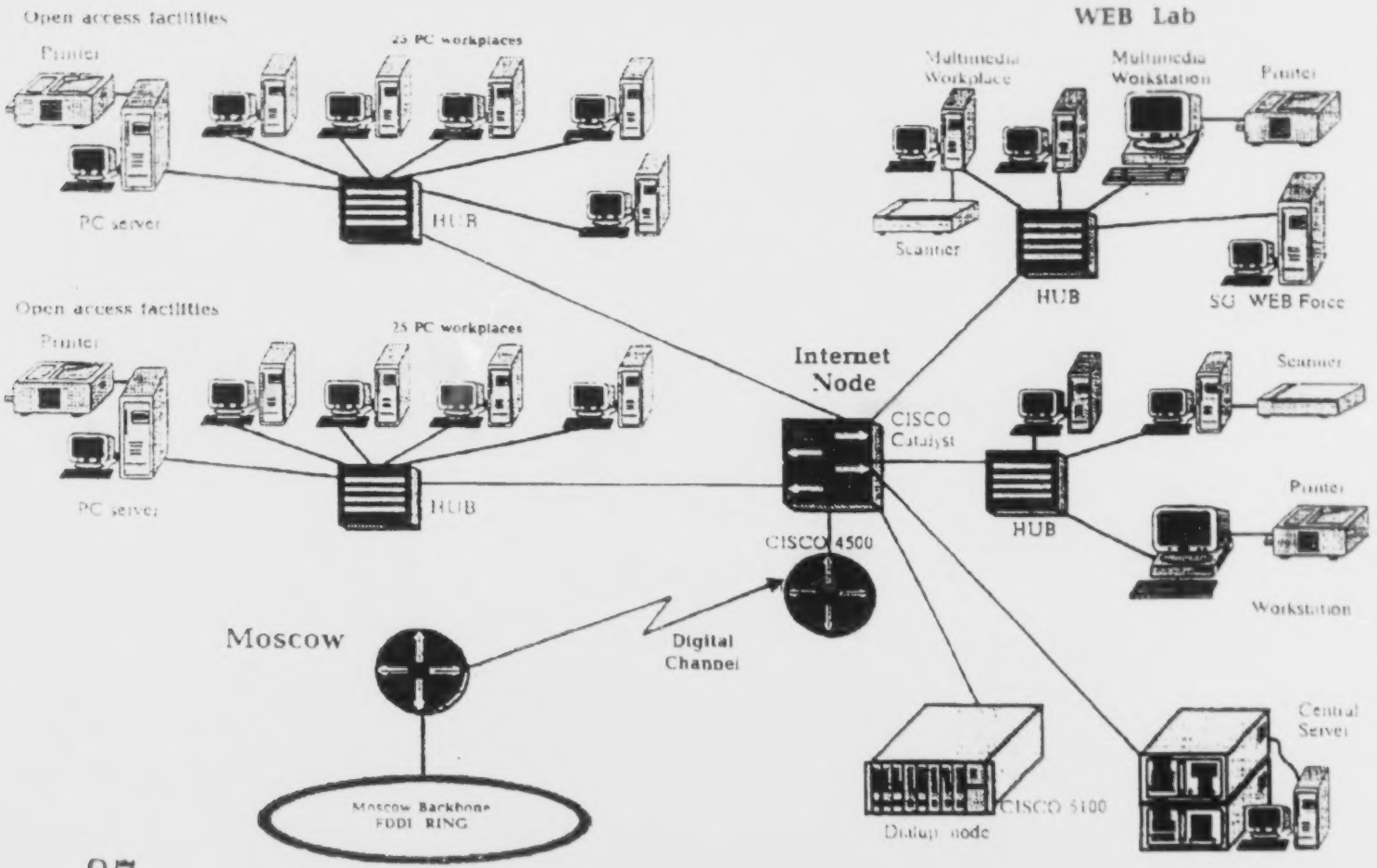
Open Society Internet Center of Far Eastern State University



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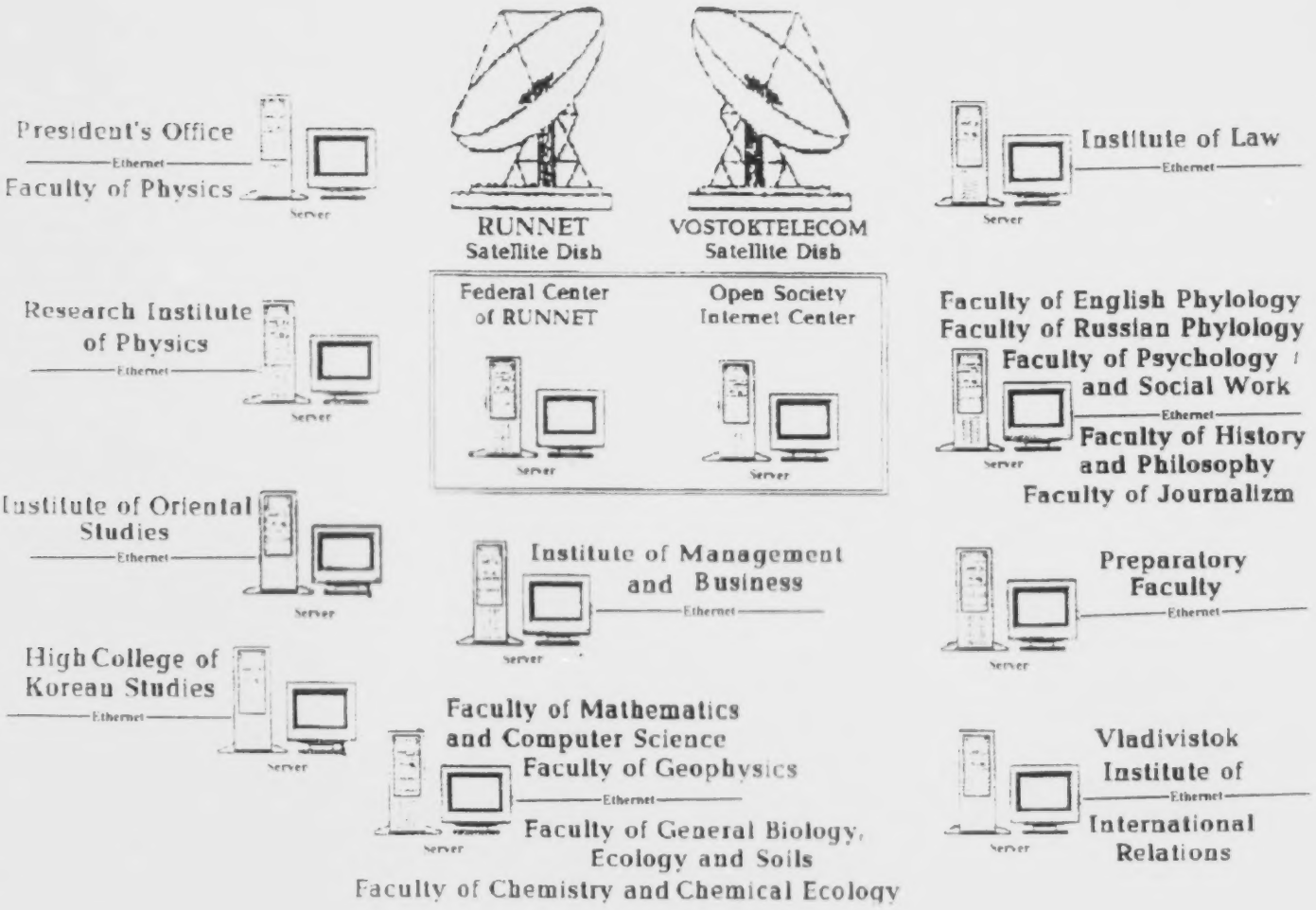

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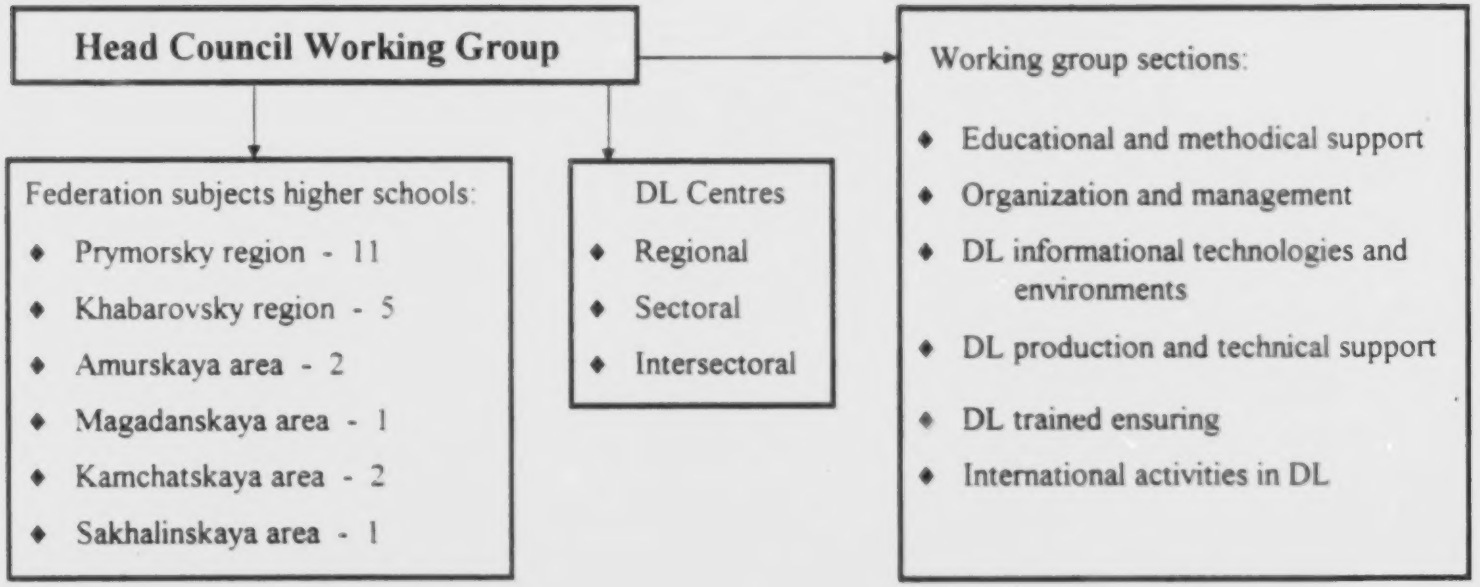
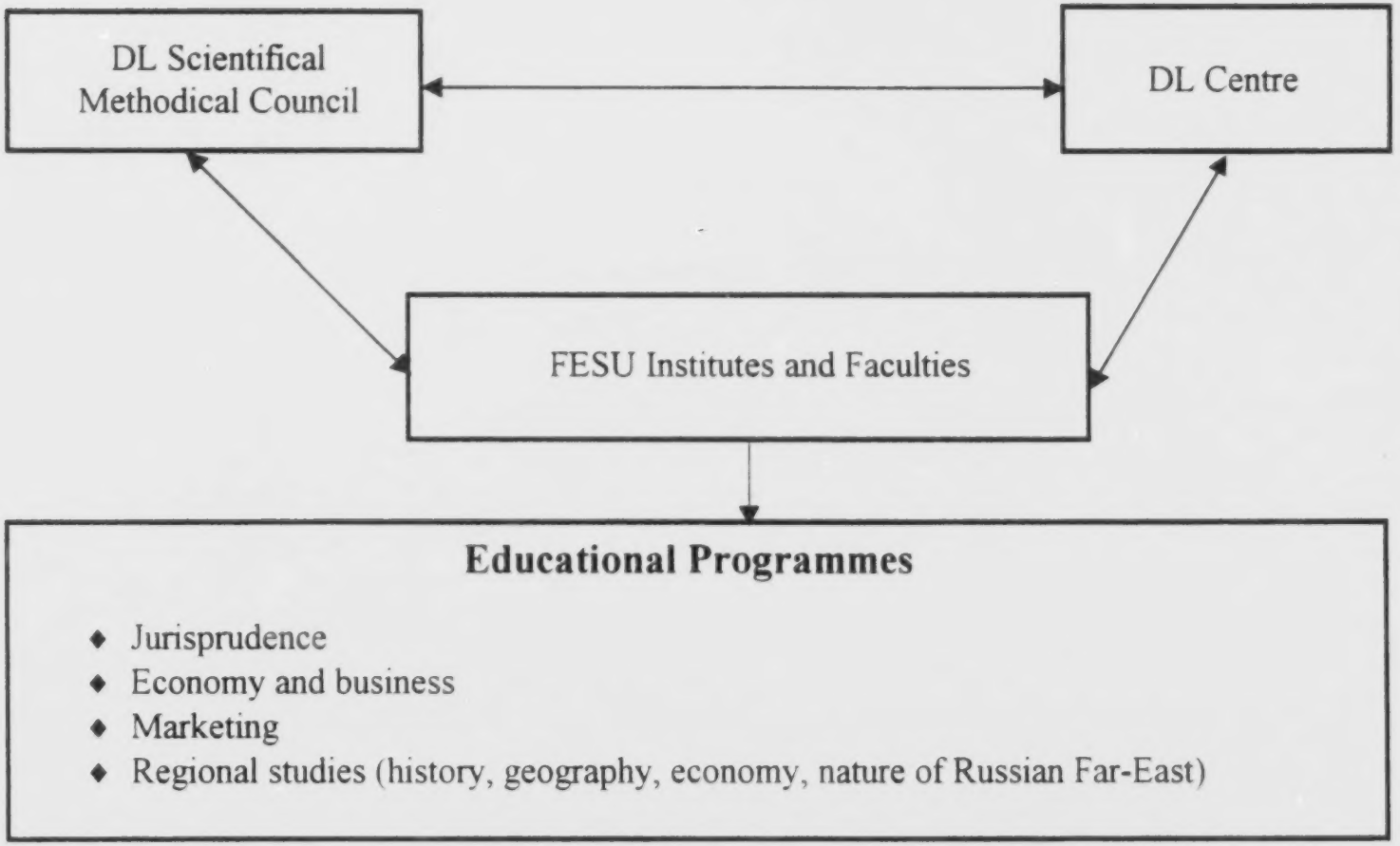
DL System Structure of Russian Far-East



DL System Organization in Far-East State University (FESU)



The Main Directions of Region DL Programme

- Organization and management of DL system;
- Normative and legal support of DL system;
- The creation of theoretical foundations for DL methodologies and technologies;
- Elaboration of educational environments and DL college (standardized, for universal secondary education, for graduate specialists level etc.);
- Choice and elaboration of standard instrumental and programme means for any DL technologies support;
- Creation and development of informational DL environments;
- The training and professional development of instructors for DL;
- DL system integration into the world educational system; and
- Joint international projects and educational programmes.

Viet Nam

Vietnamese Higher Education in the "Doi Moi" Period

Prof. Lam Quang Thiep
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Ministry of Education and Training

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■ Socio-Economic Context

With the adoption in 1986 by the Sixth Communist Party Congress of the renovation programme for social and economic reform, known as **'Doi moi'**, the Vietnamese economy is currently in rapid development. Many different measures have been introduced over the last 9 years for encouraging transition from centralized, planned economy to market economy. The measures adopted were immediately effective. From 1989, agriculture grow has led to the resumption of exporting rice 1-1.5 million tones per annum. The triple digit inflation (775 per cent in 1986) has reduced to twice digit (61.7 per cent, in 1991 and 12.7 per cent in 1995). Industry and exports have registered some impressionable growth since 1989. The service area in the economy has developed very quickly. Command economics has not been totally removed, and ***supply targets*** are still applied in some areas of production. However, foreign investment, joint ventures and the private sector have grown. Export promotion zones have been and are being created. The GDP average increase rate was 8.2 per cent in 1991-1995 period[1].

The estimated labor force in Viet Nam is 33 million, of which the technical labor force numbered 3.4 million or 12 per cent of the work force, and 86 per cent of professionally trained persons were employed in the state sector. The non-state sector accounted for 86.5 per cent of the total labor force but employed only 2 per cent of the professionally trained workers. The labor rate: 72 per cent are employed in the agricultural area, 11 per cent - in the industrial and 17 per cent in the other areas[1].

The work force will grow in the next two decades by about one million each year. Job creation has been below this level. As a consequence of economic reform, unemployment is increasing.

To achieve the economic growth envisaged, high external efficiency of the education and training system will be essential. Most of the new labor force entrants, and many of the unemployed will require training for employment. For instance, Viet Nam is currently facing a critical shortage of entrepreneurs and managers familiar with up-to-date technologies needed for development in almost all sectors of the economy.

■ Current Status of the Vietnamese Higher Education

Brief History

The ancient Higher Education (H.E.) in Viet Nam had established from 11th century with Quoc Tu Giam (School for Royal sons). But the modern pattern of H.E. does not have a long history of development. Only in 1904 the first modern university was set up in Hanoi to serve the whole Indochinese Peninsula. Since the August Revolution of 1945, and especially after the victory in the war of resistance against the French in 1954, the number

of colleges and universities increased vigorously in both North and South of Viet Nam. Since 1975 all colleges and universities in Viet Nam have been united into one system.

In responding to the change of the socio-economic policy, since 1987 the H.E. system has initiated some important renovation policies: the H.E. will be aimed at serving not only the state and the collective economic sectors as planned but also to serve all other economic sectors; the budget for H.E. was not only based on the allocation of the state budget but also based on the mobilization of other resources, including the tuition payment of the learners; the training scope developed on the basis of the diversity of the delivery modes, and at the same time all training programmes must ensure the training quality and satisfy the new requirements of the society and economy.

The Present Network of Higher Education Institutions

Until 1993 Viet Nam did not have large multi-disciplinary universities. There were In our country only small colleges grouped according to their specialties and some comprehensive universities that provided programmes in the humanities, social and natural sciences. The scope of almost all of the H. E. institutions in Viet Nam was very limited. This situation had caused many difficulties relating to investment for the development of the material facility and the teaching staff, and had hindered the improvement in the quality of training. The mono-disciplinary models of institutions limited tile organization of training on a wider spectrum and the capacity to associate research and social service in a comprehensive way. So one of important tasks of Vietnamese higher education system now is the amalgamation of the institutions.

From the end of 1993 some big multi-disciplinary universities have been established by merging former small H.E. institutions: Hanoi National University (12/1993), Hochiminh City National University (1/1995), Universities of Hue, Thai Nguyen, Danang (4/1994).

According to recent statistical data[2], the number of H.E. institutions at present is 107 (92 public and 17 private, not including the system of the military and security H.E. institutions) and distributed according to the following specialties:

- Comprehensive Universities and colleges	8
- Universities and colleges of engineering	9
- Agricultural-forestry-fishery colleges (mono and multi-disciplinary)	3
- Universities and colleges of economy, management and law	5
- Colleges of foreign languages and foreign studies	2

- Colleges of medical sciences and sport 7
- Colleges of culture and fine arts 7
- Teacher colleges (outside universities) 3
- Open Universities 2
- Private H.E. Institutions 17
- National and provincial teacher training junior colleges 39
- Other junior colleges 7

H.E. institutions have been distributed in some main cities and provinces as follows: Hanoi, Hochiminh City, Hue, Haiphong, Danang, Thainguyen, Cantho, Hasonbinh. Until September 1997, 17 private H.E. colleges have been established.

Governance and Administration in Higher Education System

At present the management of the H.E. system has been stipulated as follows: The Ministry of Education and Training (MOET) will manage directly about 30 important H. E. institutions (that means to allocate the budget and to make decisions on personnel and function). Two newly established Hanoi and Hochiminh City national Universities have been given the acts with more or less autonomy. Other ministries (related especially Health, Culture and Art) supervise the related mono-disciplinary institutions. The provincial authorities govern the junior colleges located in their territories. However, all institutions are under the management of MOET regarding the academic aspect, despite the fact that they are under the direct supervision of provinces or other ministries (that means MOET will promulgate and manage the admission regulations, the general structure of curricula, the exams and the granting of degrees).

At present there is not the full system of legal documents, which stipulate the management relation between institutions and the Ministry, just as the scope for autonomous) governance by the institutions. However, for H.E. institutions) which are under the direct management of any ministry, there exists some stipulation as follows: regarding finance, the Ministry will allocate the State budget to the institutions together with close stipulation on expenditures, including the salary and scholarship. Regarding organization, the Ministry stipulates the number of personnel, and manages the admission and the transferring of the senior teaching staff as well as their promotion to a higher position, while the institution manages the junior teaching staff. Regarding the aspect, the MOET has given general requirements for teaching programmes (total number of credits, percentages of knowledge areas: general education, majors and concentrations...) The

Ministry will give the core curriculum for the first phase of undergraduate programs, will approve the establishment of new majors, the exam regulations, and the granting of degrees. The Ministry will also allocate budget to major research projects and monitor the implementation. Regarding supervision, at the present HE level it dealt mainly with complaints. There has not been anybody at the Ministry to conduct a thorough evaluation of the HE institutions and their quality in order to accredit officially the degrees. Some activities for establishing a quality assurance system have been started.

The lack of the full system of legal documents on the management of HE institutions leads to 2 tendencies: one is the extreme dependence of the institutions on the Ministry that reduces their dynamics, and the other is the lack of control or guideline, which negatively affects the training quality.

The Academic Staff

The academic staff for the school year 1995-96 are as follows[2]:

Total number of teachers: 21,142 (out of 33,683 education personnel, and makes up 63 per cent).

- In which number of women makes up about 34 per cent and people from ethnic minority groups make up 2-3 per cent.
- Distribution by age: in general, the average age is high, and much higher at institutions founded a long-time ago. Only about 30 per cent of the teaching staff are under 35 years old. The proportion of young and well-qualified staff in higher education is small. Higher degree training in the country is limited.
- Distribution according to qualification: 2,991 are doctor degree holders make up 14 per cent, among them 1,273 associate and full professors. The higher degree holders are concentrated mainly in Hanoi and Hochiminh city.

Students

- **Number of Students**

  In 1995 the total number of students of higher education in Viet Nam was 354,103; from which the number of full-time equivalent students (FTE) was 280,281[3]. This figure represents about 40 full-time equivalent students per 10,000 inhabitants and the ratio between students per youths of the 18-24 ages group was about 7 per cent, a very small proportion compared to some countries in the region (see Table 1).

From the MOET statistical data of the student enrollment some facts can be drawn.

Generally speaking student enrollment since 1980 up to present tends to have declined, due to the shortage of training funds. From 1988, thanks to the new policy on student admission and the mobilization of funds including tuition payment by the students, this trend was stopped. Regarding the fields of training, the number of students in the industrial and agricultural production sectors and in teacher training has decreased because the needs for human resources for the state and collective economic sectors reached the saturation point. In the last 3 years the total student number has being increased very fast due to the economic grow and the diversification of training modes.

- **Admission**

There have been many changes in student admission in recent years. Before 1987, the entrance exams for the whole H.E. institutions were administered by the Ministry of Higher Education. In 1987, the selection process was turned over to each institution.

Students are required to take the entrance exam before being admitted to universities. The prerequisites for the entrance exam for the full-time regular students are as follows:

* Graduated general or vocational secondary education.
* In good health (within clearly stipulated regulations)
* Under 32 years of age (under 35 for women, those who served in the army and those from ethnic minority groups)

For the part-time and open admission students the last two conditions are not necessary.

The entrance exams are divided into 4 groups according to the fields of training or appropriate to the type of institution one wishes to attend. The subjects of the exam for Group A include mathematics, physics and chemistry; for Group B: mathematics, chemistry and biology; for Group C: literature, history and geography; and, for Group D: literature, mathematics and foreign language. The subjects of the exams have changed in recent years in many institutions and the subject of Vietnamese Language was introduced in many institutions. In addition to the above-mentioned subjects the preselection has been applied to certain fields of studies (for example: the capacity to speak required by foreign language; drawing required by architecture and the personal appearance required by the communicative jobs etc.). Regarding academic qualification, the results of the

exam are the only basis for selection; the results of the school leaving exam have not been used for and entrance exams are considered so difficult that even the best graduates of secondary education could complete only parts of them. From academic year 1996-1997 a pilot entrance examination by standardized objective tests has been carried out at Dalat University and in near future a joined between universities entrance examination will be organized.

- **Scholarship**

  In the past, under the subsidy mechanism, every student of H. E. institutions was granted a scholarship and other subsidies. The scholarship funding was distributed equally. Since 1988, with the reorientation of higher education in the direction of serving the market economy, the H. E. institutions have been permitted to collect tuition from most of the students. The equal scholarship system has been replaced by the system considering student academic achievements. From 1994 a special fund for students to receive loans has been created.

  For each institution the number of students admitted has a lower (bottom) limit stipulated by the Government according to which training funds will be allocated, whereas the upper (top) limit depends on the training capacity of the school and the *performance* capacity of the students indicated through their scores in the entrance exam.

Training Procedure/Pattern and Delivery Modes

- **Programmes Leading to Degrees**

  Higher education in Viet Nam has the main training programmes leading to degrees as follows (see Figure 1):

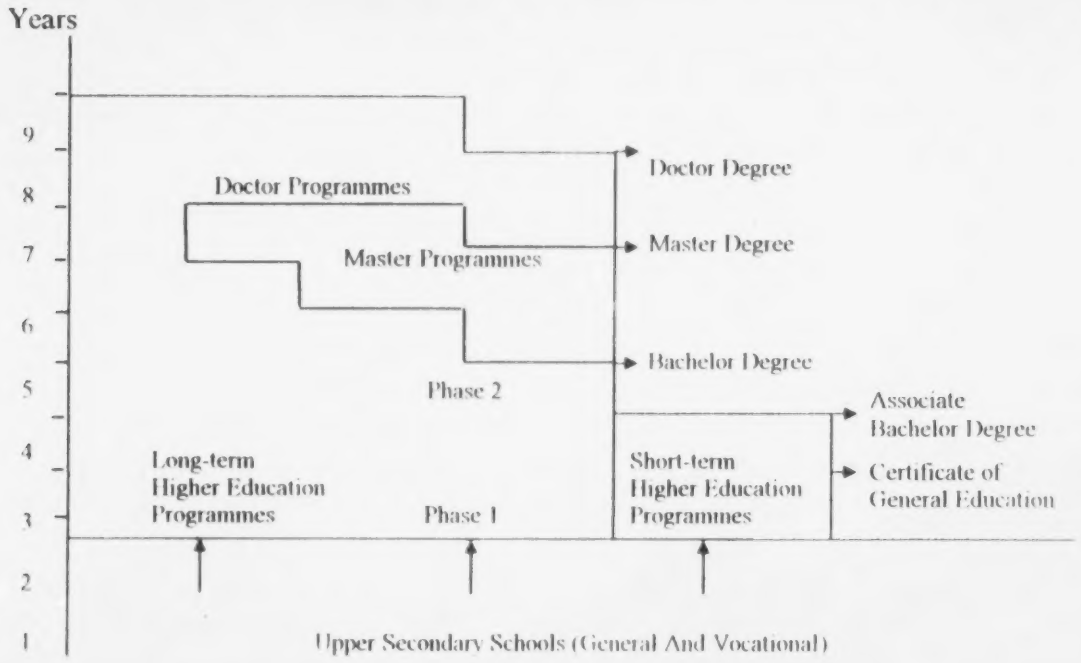

Figure 1. Higher Education System In Viet Nam

a) **The long-term training programme** lasting 6 years for students of medical and dental sciences, 5 years for students of industrial engineering; and 4 years for the majority of the other institutions.

The majority of the full-time or long-term training programmes are divided into two phases:

* Phase I: 3 semesters of studying general education
* Phase II: be provided knowledge related to the professional areas

Students fully completing all of the study programmes stipulated for the first phase will be granted a Certificate of General Higher Education. From 1994 MOET has given the requirements for first phase of undergraduate programmes in seven groups of study fields.

At present almost all of institutions adopted the 2-phase training programmes with a wider range of specialties. Graduates of the full-time or long-term training programme will be granted a degree with the title related to their specialty, such as *cu nhân* (bachelor), *ky su* (engineer), bác sy (medical doctor), or *luât su* (lawyer), etc.

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b) **The short-term training programme** (for junior colleges) lasts 3 to 3.5 years. At present, the short-term training programme is being carried out by junior colleges (teachers' and non-teacher), and by some universities, as additional programmes. Students who have finished the short-term programmes mentioned above will be granted a degree with the title of *Cao dang* (Associate Bachelor degree).

c) **The master programme:** This programme admits graduates of the long-term H. E. training programmes and lasts from 1.5 - 2 years. The structure of the content of the graduate programme in Viet Nam remains a problem unsolved officially, but step by step the curricula for these programmes have been developing. Students finishing the graduate programme will be awarded a degree with the title Thac sy (*Master*).

d) **The doctorate programme:** Students will be admitted as candidates of the Doctorate of Science programme are from two sources: the graduate with excellency, and those who have earned the Master's Degree. Students of the first group have to sit for the exam following a – programme called "minimum", which consists of political subjects, foreign language and some subjects related to a given specialty or profession; students of the second group will be exempted from this exam. In addition, the most important requirement is that the student has to defend a thesis. If s/he successfully defends their dissertation, s/he will be awarded a doctorate degree with the title *Tien sy* (equivalent to the Ph.D) of a given specialty or profession.

- **Annual Teaching Process**

The school-year of the H.E. institutions in Viet Nam has been usually divided into two semesters: the first semester normally start in the middle of September and ends in the middle of January, the second semester usually starts in the middle of February and ends at the beginning of June.

Up to 1988, many universities in Viet Nam applied the annual training procedure: every student of one class had totally the same curriculum; classes were "closed", meaning a student of this class could not learn subjects taught for other classes; those who did not complete the annual training programme had to repeat and to learn all subjects again from the beginning. From the 1988-1989 school year, according to the advocacy of the MOET, many universities started to develop a type of credit system. But only from 1993-94 academic years some H. E. institutions (Hochiminh City University of Technology, Dalat University) have applied credit system similar to the system in the USA. At present about 10 H.E. institutions have applied the credit system, and this number is increasing.

- **Additional Training Modes**

* *The in-service training mode*: In addition to the regular and full-time training programmes, an in-service training programme has been developed in Viet Nam since 1960. This form is aimed at helping the workers who have got a job already to learn more about the profession they are performing. Normally the training has been concentrated into a short period of time, some months in a year, and organized either at the school or right at the working places to facilitate the programme for the learners. The curriculum of the in-service training programme is lower than that of the formal training programme, with less attention paid to the training of professional skills. At the Ministry of Education and Training there is another department responsible for in-service training; and because of that the curriculum of this training form is not in conformity with that of the formal training programmes.

* *"Open admission" mode*: The "Open admission" mode developed in Viet Nam in 1988. This mode appeared due to the pressure of the contradiction between the learning needs at the higher education level and the limited admission capacity of the higher education institutions, despite the fact that additional students were permitted to attend the various institutions with personal funds and/or in special programmes. The appearance of the "open admission" system caused various reactions and social opinions. In 1992 the Ministry of Education and Training decided to stop this type of open admission system so that in each institution all undergraduate degrees, for both regular and open admission students, have an equal value. In 1993 two open universities, one in Hochiminh City and another in Hanoi have been established for another type of open admission (with special assessment methods for student selection).

- **The Teaching and Learning Methods**

* *Teaching method*: At present, in all universities of Viet Nam, the teacher's monologue in class is the main method. Other methods, which are based on the initiatives of the students such as seminar, case study, discussion, problem solving, etc..., have been used with some subjects but are not very popular. With the schedule of nearly 30 class-periods per week, the proportion of periods for self-study per class period is smaller than 1/1. At present, it is not feasible to improve basically the teaching and learning methods due to the habit of teachers and students preferring traditional method. The other more serious reason is the shortage of textbooks and materials and lack of libraries and laboratories.

* *Evaluation of students' achievements*: The student learning achievement are evaluated by scores for all subjects, and at the end of a term or a year an average score is calculated, for this the weight of each subject is the number of its credits. A graduate thesis is considered as a major subject equivalent to certain credits.

Each subject has two exams in one semester, and the student success in this subject is evaluated mainly on the basis of the score of the final exam. At present the methods of examination at the H.E. institutions in Viet Nam have not been standardized. The organization of the exam and the selection of questions are mainly based on the traditional method and teachers' experiences. To eliminate the bias of teachers, written exams have been organized by many institutions (in which the upper part of the exam paper bearing the examiner's-name will be cut off). Instructors have used mainly essay tests, the objective test method has started to apply in some H.E. institutions.

Research Activities

About 300 state research institutes are attached to various ministries and thereby separated from higher education institutions, so the funding allocated for research in higher education institutions is a low percentage of the annual budget. Therefore, at many universities, even at some large ones, research activities are considered to be a secondary priority, after teaching. This situation causes a negative influence on the qualification of the academic staff and the quality of their teaching.

Some pivotal institutions have research activities. This provides additional income and equipment for the institution and experience for its staff. Others have initiated diverse programmes of production and social services, both philanthropic and profit-making. Some of these activities are barely related to the academic orientations of the institutions.

Some main data of H. E. system are shown in Table 1[1]

Table 1.

Topic / Year	Current Status 1995	Some Orientation Numbers 2000
1. State Budget for education (mill. USD)	570	1,700
- Percentages of total budget (per cent)	11	15
- For Higher Education	67	204
- Per student (USD/year)	360	700
2. Number of H.E. Institutions:		
- National Universities	2	
- Local Universities	6	
- Open Universities	2	
- Other Institutions	34	
- Junior Colleges	48	
- Private H.E. institutions	17	
3. Students:		
- Total (thousands)	354	600
- Full-time (thousands)	188	290
- FTE per 10,000 of population	40	75

■ Higher Education Reform Since 1996

General Description

♦ **Strategic Goals**

- *New System. Structure*: The new H.E. system has four main levels of qualifications: Associate Bachelor, Bachelor, Master and Doctor. There should be a threshold standard for each level. There are two main delivery modes: full-time and part-time with the same requirements leading to a single degree.
- *New Network of H.E. Institutions*: consists of universities (national and regional), specialized colleges, community colleges, junior colleges of technology, 2 open universities, private and semi-public H.E. institutions, some international H.E. branches
- *Student number* is increasing very fast: from 124,000 in 1991 to 354,000 in 1995 (growth rate is 30 per cent). And in comparison with 1995 expected student number will increase about 1,5 times in the year 2000 and 3,5 times in 2005.
- *Quality*: To determine threshold standards for all levels of degrees, to establish a quality assurance system and accreditation for all H. E. institutions (public and private). The system structure and standards must be comparable with those in the region (ASEAN) and the world.

♦ **Measures**

- *H.E. Financing*: The percentages for education in the state budget has been increased, and financial resources from all of economic sectors, overseas loans and grants have been mobilized.
- *Extension of the size of H.E. by the following means*:
  - * The admission capacity of conventional universities will be maximized with high degree of quality assurance.
  - * For open universities: to stimulate open admission and distance education systems with good measures of testing and evaluation of student achievements.
  - * For community colleges to organize transfer programmes.

- *Quality assurance*:
  - The goals for all of H. E. levels have been determined, H. E. curricula have been redesigned according to general standards (with good combination of general and professional education, and with clear specification of requirements for Bachelor and Master degrees). Special attention has been paid to disciplines of economics.
  - The credit system has been applied in many H.E. institutions and will be extended to all of them.
  - The active methods of teaching and learning using new technology instruments have improved. Student learning load should be reduced from about 30 to 20 class-hours per week.
  - Entrance Examination will be reformed. The different testing methods for evaluation of student achievements are applied. The quality assurance system will be established, internal and external assessment procedures for all levels of H.E. institutions (public and private) will be organized.

- *Relationship between the initial (degree) education and continuing education*:

  To ensure broad knowledge and skills in the initial stage of training and provide opportunities for upgrading through continuing education. H.E. will be adjusted to the needs of a market economy following the "formula":

  QUALITY OF H.E. IN THE MARKET ECONOMY = BROAD-BASED INITIAL EDUCATION + PROFESSIONAL UPGRADING THROUGH CONTINUING EDUCATION

- *Good conditions of organizations and resources should be provided*:
  - To reorganize good networks of H. E. institutions;
  - To create good legal environment for H.E. system in the direction: to increase the autonomy and accountability of H.E. institutions.
  - To concentrate investments on centers of excellence;
  - To improve competence of academic and managerial staffs;
  - To improve material base for H.E. institutions: textbooks, libraries, laboratories, computer centres. To prepare good infrastructure for inter-institutional and international linkage through Internet.

Some New Measures Taken and Some Problems

For solving the contradiction between the demand of H.E. booming and the limitation of financial resources:

- **Measures**
  - Reconstructing system of H.E. degree levels for making it more flexible for students to organize their learning process and more associate with regional and world-wide H.E. systems;
  - Redesigning the network of public H.E. institutions for better use of human and financial resources;
  - Setting up a non-public H.E. institution system and 2 open universities; establishing a system of community colleges; attracting contributions from different types of companies;
  - Mobilizing student tuition fees (at the same time establishing a loan system for poor students); and
  - Applying some new technical measures for managing the teaching process: the credit system, the standardized objective tests for national examinations.
- **Problems**
  - The weakness in competence of H.E. administrative staff at all levels: for running multi-disciplinary universities in the direction of increasing the autonomy and the accountability; for determining the labour market demand in different areas of study; for implementing the quality assurance system;
  - The imbalance in student numbers in different study areas, which leads to the unemployment of graduates;
  - The gap between students from poor and rich families about the ability to access H.E.; the difficulties in the management of student loan system: how correctly to determine the objective, how to impress receivers to give back; and
  - The shortage of qualified teaching staff; non-public H.E. institutions attract teaching staff from public H.E. institutions; the lack of experiences in the quality management for non-public H.E. system;

■ International Co-operation as a Strategy in the Reform Process

In Viet Nam, the transition Policy toward Market Economy was announced in 1986 by the Government at the same time with the open door policy. For H.E. international co-operation plays very important role in the reform process.

- As a result of the difficulties experienced by the former Soviet Union and East European countries, collaboration in H.E. between Viet Nam at those countries virtually came to a standstill, but now is gradually recovering and developing. The former ties with the East Germany are maintained and continue to develop by the Federal Republic of Germany. The existing relations between H.E. institutions in Viet Nam and China are also developed.

- Remarkable progress has been made in international co-operation with western H.E. institutions, especially with those in Holland, France, Britain, Nordic countries, Canada and the USA. The outstanding example of fruitful collaboration is with Australia.

- Close linkages have been formed within ASEAN frame and SEAMEO. The RIHED plays the special role to promote intra-regional co-operation. Associations of H.E. institutions (like AUAP, AUN, ASAIHL) are very active in forging close link among H.E. institutions in the region.

- A great variety of forms of collaboration have been used such as staff and student exchange programmes, staff development, twining programmes, and off-shore programmes in Viet Nam.

- Among the international Agencies, UNESCO plays very crucial role in organizing a lot of seminars and workshops on the exchange of experiences such as: the mobilization of additional funding for H.E., the operation of private institutions, re-engineering H.E. for 21st century. UNDP is also very active in helping Viet Nam to conduct study on Education sector and Human resources in our country, conjunction with World Bank to organize a workshop for selection of strategies for H.E. in Viet Nam.

This workshop is a significal initiative by UNESCO. H.E. of the countries in transition economy share similar background which also give rise to similar issues and challenges. Therefore, it is of great significal and benefit to exchange experiences.

It is especially meaningful that the workshop is held in China, a country has involved from a centrally planned economy in very successful manner and quickly becoming a regional power in the next century. Those countries which have similar backgrounds, Viet Nam included, shall benefit a great deal from China's experiences.

We highly appreciate this initiative of UNESCO. I would like to thank my Chinese colleagues who are kind enough to host this workshop. And I would also like to send to all the participants the warmest greeting.

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Keynote Speech

Challenges and Strategies for Chinese Universities in the Transition from Planned Economy to Socialist Market Economy in the Information Age

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The process of transition of the Chinese economy from the ossified centrally planned economy to a dynamic socialist market economy has led to a series of profound socioeconomic changes, which has strong impact on the Chinese universities. Also, the economic reforms coincide with the revolution of information technology and knowledge explosion that have led the world into a new age of high-tech based information economy. The ability to generate, accumulate, deploy, and utilize knowledge information becomes crucial for development. As knowledge based institutions, universities will play a more important role in the coming century. Furthermore, the information economy is international by nature. Capital, production, management, market, labour, information and technology are organized across national boundaries, which has resulted in a strong tendency of globalization. Cross cultural interactions, exchanges of students and faculty members, joint teaching and research programmes, frequent academic communications, especially through the utilization of the internet, have formed an irresistible and irreversible trend of internationalization of higher education. This presentation is to discuss some of the major challenges and strategies for Chinese universities in such a rapidly changing context.

■ Establishing a New Institutional Framework for Chinese Higher Education

The first and foremost issue for Chinese higher education system is to establish a new institutional framework and operation mechanism fitting in with the new context of the dynamic market economy of the information age. Since the late 1970s, China started to implement new state policies of economic reform and opening up to the outside world, aimed at speeding up economic development, initiating the process of transition from the centrally planned economy to a market economy. Among the transitional economies in today's world, China has been relatively successful because the reform policies were systematically formulated and practically implemented according to its specific social, political, economic, and cultural background. The success is also due to the high saving rate and high investment rate of the country, the rich resources, availability of relatively educated labour, priority to science and education, the Chinese entrepreneurship, and the commitment and determination of the leadership to reform. Over the past 17 years, China's GDP has kept an annual growth rate of 10 per cent on average. It has also done well to bring down the inflation. Together with the increased industrial labour productivity, the living standard of the people has increased at about 7 per cent each year in constant price. **Eighteen** years of reform efforts and modernization drive have won China an international acknowledgment for its achievement in economic development. The principles of reform, opening up and market economy is deeply ingrained in the mind of the Chinese people. The Socialist market system is gradually institutionalized.

However, the existing institutional framework and operation mechanism for Chinese higher education is still basically the one that took its shape in the context of the centrally planned economy since 1950s. It was in such a framework the current structure and administrative system of Chinese higher education was established and evolved in the past forty years. The higher education system then was taken as part of the central planning process as demonstrated in Figure 1. The central government first formulated the national socioeconomic development plan and corresponding manpower plan, according to which the State Planning Commission and the State Education commission jointly formulated the higher education enrolment plan, which included (a) the number of total students enrolled, (b) enrolment quota for each sector and each province, (c) the distribution of student enrolment by field of study, and (d) institutional enrolment quota by discipline and specialty. According to the specific manpower requirements, higher education institutions formulated curriculum and instruction plan. Students were trained in a relatively narrow specialization. Graduate job assignment plan was formulated by government according to the staffing plan of each line ministry and province. From Figure 1, it is not difficult to find that within such a framework the system is highly centralized and universities were attachments to governmental agencies. As shown in Table 1, among the 358 national level universities and colleges, 35 belong to the State Education Commission, all other 323 universities and colleges under the jurisdiction of 61 central line ministries, such as Ministry of Electronic Industry, Ministry of Metallurgical Industry, Ministry of Agriculture. The higher education system has been departmentalized and segmented. Obviously, such a higher education system based on the planning rationale could not well fit in with the new market economy.

Table 1. Number of Higher Education Institutions by their Affiliation and Jurisdiction in China, 1995

Affiliation	No. of Institutions	Enrolment	Total Employee	No. of Teachers	Student Teacher Ratio
State Education Commission	35	270,409	140,455	46,270	5.84
61 Central Ministries	323	1,001,031	407,959	146,077	6.85
Provinces	696	1,634,989	492,156	208,395	7.84
Total	1,054	2,906,429	1,040,570	400,742	7.25

Source: Department of Planning, State Education Commission, 1995

As the economic sector took the lead in reform, dramatic changes have taken place in the human resource sector, which is closely related to the higher education system. As stated by the Chinese leadership (CPC Central committee, 1993) that in the new socialist market economy, it is the market demand and supply, but not the central plan, will play the fundamental role in resource mobilization, allocation, and utilization. In the human resource sector, the labour market needs will play the fundamental role in human resource development and allocation. Under such a system, universities will have to gear their programmes to meet the human resource needs of the labour market. This does not mean that all the teaching, research, and services of universities will be shaped by market force, but means that the human resource needs of the socioeconomic development as signaled by labour market supply and demand will be of primary importance to universities. As illustrated in Figure 2, under the new market economy, the interaction of labour market demand and supply will be fundamental to the human resource model, which influences the wage structure by level and type of education, and the expected benefits from higher education as well as the demand for higher education opportunities. such demands will stimulate the provision of higher education, which will result in the outputs of graduates from universities to labour market. The relative competitive advantage of the graduates of difference type and level education in the labour market performance will serve as a feedback to the university operation.

For example, if one type of graduates is over supplied, the competitive advantage of this type of graduates will be reduced in the labour market, thus the demands for this type educational opportunities will be reduced, universities will adjust their programmes accordingly. This is what exactly happens in today's China. However, the market is not omnipotent. Market failure also happens from time to time. Thus, the state will still have a very important role to play in this market context, and the state plan will serve as a guidance, but not a mandate. As show in Figure 2, the government will have many action channels in such new framework. It can influence, supervise and coordinate the operation of higher education through (a) formulating and implementing the country's macro-economic policies, which will influence the total demand and labour market needs, and which also influence the employment and wage policy in the public sector; (b) funding policies, such as financing those programmes of national priorities; (c) developing a quality control system for higher education institutions; (d) establishing a legal infrastructure for both protecting and regulating the operation of colleges and universities; (e) and information services.

Figure 1. The Operation Framework for Chinese Higher Education in the Centrally Planned Economy

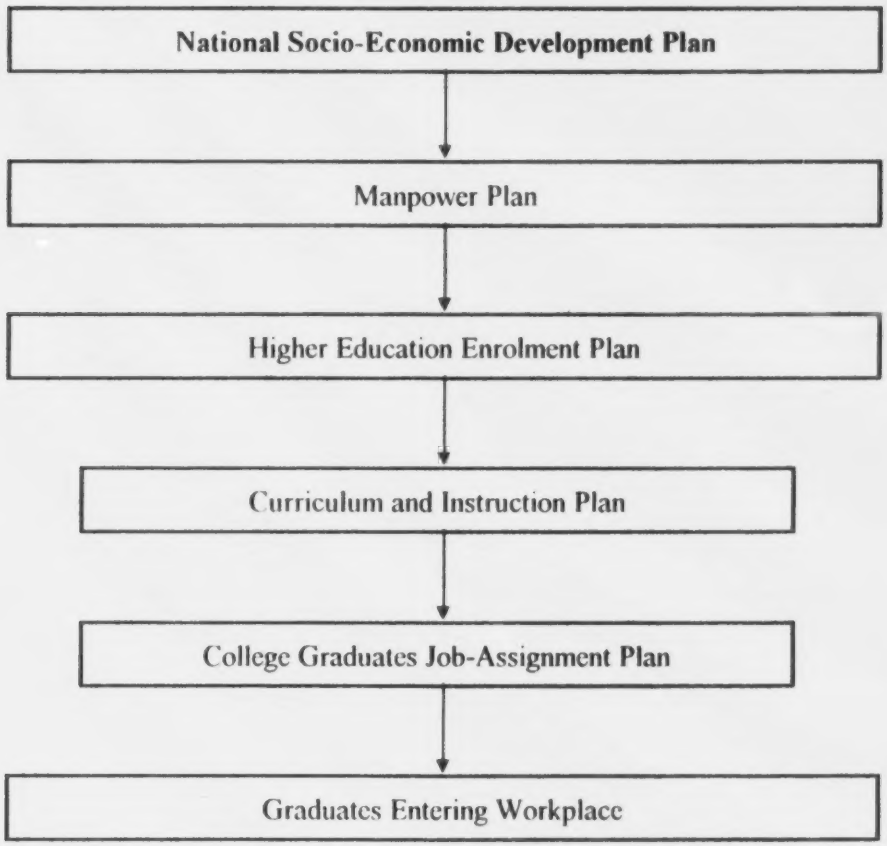
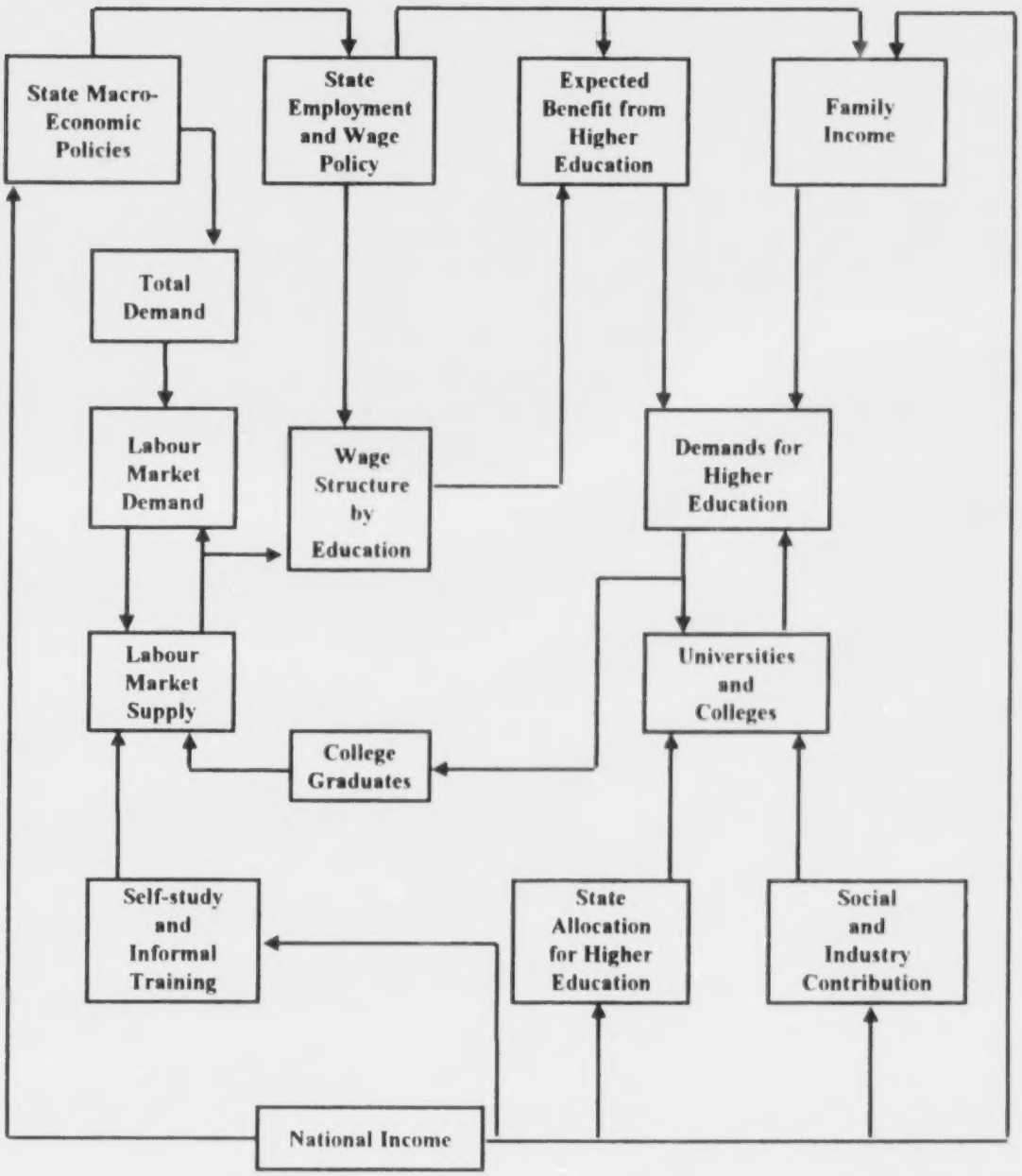


Figure 2. The Operation Framework for Chinese Higher Education in the Socialist Market Economy



The ultimate goal of the current economic reform of China is to establish a dynamic socialist market economy based on a legal infrastructure. The target framework for Chinese higher education in the 21st century has to fit in with this new socioeconomic context. However, to develop and institutionalize such a new framework is a tremendous task, because there exists a strong structural inertia from the existing framework as well as from the existing conception of how higher education system should be. As correctly pointed out by the State Education Commission of China (Zhou 1997), The key to higher education reform is the reform of the system of governance and administration. This should be a series of reforms, including reorientation of the government/university relationship, stipulation of the legal status of higher education institutions, granting more autonomy to universities enabling them operate according to the needs of socioeconomic development and labour market demands, but not dictated by the government plan. The state will function through formulating higher education laws and providing policy guidance, and through coordination, evaluation and accreditation.

Much has been done along this general direction over the past ten years. It was in the mid 1980s China came to realize that the rigid plan and strong centralized administrative control over universities and colleges made the system very ossified. It hampered the development of Chinese higher education by stifling the enthusiasm, initiative and creativeness of higher education institutions. In order to make the higher education system more flexible, innovative, and adaptive to the rapidly changing economy, it was imperative to change the form of governance by loosening state control and granting more autonomy to universities. As announced in the important national policy document, Decision on Reform of China's Educational Structure (CPC Central Committee 1985), a fundamental change was required in order to gear education to the needs of national development. "**Government agencies in charge of education are exercising too rigid control over universities, depriving them of their vitality**", thus, "**resolute steps must be taken to streamline administration, devolve power on units at lower levels so as to extend universities' decision-making power in the administration of school affairs**". The document further pointed out "**the key to restructuring higher education lies in eliminating excessive government control over the institutions of higher education and, under guidance of the state policies and plans in education, extending the decision-making power of the colleges and universities, and strengthening their ties with production units, scientific research institutions and similar sectors, so that they will have the initiative and ability to serve economic and social development**". In 1993, Chinese leadership issued a new document, China Education Reform and Development Outline (CPC Central Committee and the State Council, 1993). It further pointed out that Chinese universities will be given the status of legal entity and more autonomy, and government will change its function from direct management and control to policy guidance, monitoring, coordination, and regulatory role. In recent years, a significant amount of work has been accomplished in reforming the administrative system.

For example, from late 1994 to 1996, more than 100 universities and colleges were merged, and more universities set up co-operation arrangement by crossing and breaking the existing departmentalized boundaries of their current jurisdictions. However, there still is much more need to be done along this direction in order to establish a new institutional framework and operation mechanism for Chinese higher education system fitting in with the socialist market economy.

■ Diversification and Multiplication of Resources for Financing Higher Education

The fast-growing market economy, the rapid development and science and technology, and the increase of individual income and living standard stimulated the ever-increasing demands for higher education. On the one hand, education was considered the strategic foundation of the economic success, because there was a growing recognition of the importance of the availability of well-educated manpower, especially high level specialized personnel. Indeed, the rapid socioeconomic development needs more and more college graduates. And more importantly, according the recent report by the State Statistic Bureau (1997), the rate of return to higher education for the younger generation is much higher than that for the old generation. Under the strong drive of the social and individual demands for higher education opportunities, Chinese higher education system has expanded very quickly over the past 16 years. The enrolment of regular higher education institutions in China rose from about 1 million in early 1980s to 2 millions in early 1990s, and to 3 millions in 1996 (State Education Commission 1997). This only accounts the enrolment full-time regular higher education institutions, if the adult higher education institutions and TV universities included, the enrolment is over 4.5 million.

The higher education system expanded very fast, but the increase of state appropriation for higher education simply could not keep up with the growing costs, which led to a tight budget for universities. The financial difficulties are not only caused by the dramatic development, but also because that the rapid expansion of higher education system took place without the state paying sufficient attention to the issues of economies of scale and cost-effectiveness. Many very small universities and colleges were established. For example, there were more than 300 new universities and colleges were set up in three years from 1983 to 1985, which meant a relatively high cost system evolved. The financial situation of education has been exacerbated by inflation. Because of the shortage of the Higher Education Price Index In China, it is difficult to report accurately the inflation in the higher education sector, but it is obvious that the price increase for teaching materials, laboratory consumable, staff salaries and fringe benefit, books, academic journals, especially international books and journals, are much higher than that for the reported ordinary retail price index.

At present in China, nobody could deny the fact that almost all the universities and colleges are faced with serious financial constraints. Although the costs for salaries and fringe benefits have accounted for an increasing share of the total budget, faculty salary is still relatively low. Even though basic salaries of the university faculty members are comparable to those of other professions with similar education qualifications, total compensation is much lower for teaching profession because of much larger bonuses and benefits to employees in industries. The government responded to faculty complaints about low income with some pay increases, but the increases were quickly offset by inflation. This situation has resulted in an unstable teaching force. Many faculty members have left teaching profession or intend to leave. Since a growing proportion of the funding goes to salary payment, there is a serious shortage of both non-salary instructional funds and the necessary facilities and equipment for higher education institutions. It has resulted in understocked laboratories or libraries. Many higher education institutions had to cut their subscriptions of periodicals that they had for many years. For example, a Chinese university had 1,600 international academic journals in 1988, which was cut by 15 per cent each year since then. Five years later, it only had 800 international journals left. In 1996, the quantity of new books purchased at a Chinese national University reached the lowest point in the past forty years. Even national key universities are short of both equipment in quantity and funds for upgrading their large proportion of obsolete facilities and equipment.

Obviously, without successful tackling the financial constraints, Chinese higher education system could not maintain a healthy development and upgrade its quality to international standard. Systematic strategies should be formulated including the following elements.

First, management should be enhanced to improve institutional efficiency and effectiveness to turn a relatively high cost system into a more cost-efficient and cost-effective one, which can be achieved by internal reorganization of universities and colleges to rationalize small departments, broaden specialties, eliminate duplications of programmes, and make more effective use of staff and physical resources including raising student/teacher ratio and improving utilization of classrooms and laboratories. Arrangements should be made whereby institutions or departments could share expensive equipment, faculty and other resources. One possible approach for cost-saving is to achieve economies of scale, which lies in consolidating small institutions into larger ones together with efficiency measures mentioned above. This could considerably reduce unit costs in the long run. It is crucial to break the boundaries of the segmentation and departmentalization that is the legacy of the central planned economy. The relevant administrative units should be encouraged to work together, rather than setting up competing establishments. Much have been achieved in this area in the past few years as mentioned earlier, but there still is great efficiency potential that should be tapped by more effective management.

Second, more effort needs to be made to increase state allocation. Despite the increase of the state appropriations to higher education since early 1980s, public expenditure on education in China remains relatively low by international standard. In 1996, China spent less than 3.0 per cent of its gross national product (GNP) on education, as compared with an average of 5.9 per cent for developed countries and 4.0 per cent for other developing countries. Thus, the China should further raise its fiscal effort in education investment to the level comparable to the international average in a long run. More allocation from the government budget should be given to education as whole and higher education specifically when the economy allows. To protect the share of education and higher education in the national budget, legislation on higher education spending should be adopted.

Third, universities should take their human capital advantage and the advantage of science and technology to generate revenue by themselves. This is one of the promising strategies for increasing resources to higher education. The revenue generated by universities and colleges themselves increased remarkably since 1985 when higher education institutions were given autonomy to do so. It increased from 63 million Yuan in 1978 to 672 million Yuan in 1987, and to about 3 billion in 1996. Universities could generate funds by research contracts with industries, by technical consultation for enterprises and communities. Universities could also generate revenue by providing commissioned training and educational service for industries.

Fourth, a cost-recovery system should be developed. The Chinese higher education system charged students no tuition before. It also provided free dormitory and stipend for food and other allowance for students, which amounted to about 20 per cent of the total recurrent expenditure. Since 1989, Chinese universities started to charge a low tuition and increased it gradually. One of the strategies to address the current financial difficulties is to institutionalize the cost-recovery from beneficiaries and gradually raise the fee to an appropriate level, and set up student loan and scholarship programmes for students from needy families at the same time. This is necessary and feasible because the distribution of the national income changed dramatically in recent years. As shown in Table 2, in late 1970s and early 1980s, about 30 per cent of GNP went to the state revenue, and about 25 per cent went the enterprises, and 45 per cent went individual family, while in mid 1990s, only about 10 per cent went the state revenue, 20 per cent went enterprise, and 70 per cent went to individual family in China.

Table 2. Distribution of GNP in China by Percentage

Year	State Revenue	Enterprises Income	Individual Income	Total
1980	30%	25%	45%	100%
1996	10%	20%	70%	100%

Source: Estimated by the author according information from State Statistics Bureau, China, 1996.

With increased individual family income, the demand for higher education is on rise. As shown in Figure 3, in many cases, the individual demand for entering higher education exceed the point of enrolment level from the social perspective, because, in general in China, the cost of higher education to the individual is lower than that to the society, while the benefit of higher education for individual is higher than that for the society (Min 1997). Since higher education is not compulsory education in China, recovering part of the cost from the beneficiaries will be necessary and appropriate. Since such a policy will reduce the public unit cost of higher education, it will proportionally increase the number of student places in universities for the younger generation, thus improving the structural equity in higher education in terms of the distribution of public resources for education in the society, as shown in Figure 4. Considering that Chinese higher education institutions currently enroll only about 6 per cent of the college age population, which means that 94 per cent of the college age cohort can not enter universities, this strategy will be of great policy significance.

Figure 3. The Benefits and costs of Higher Education

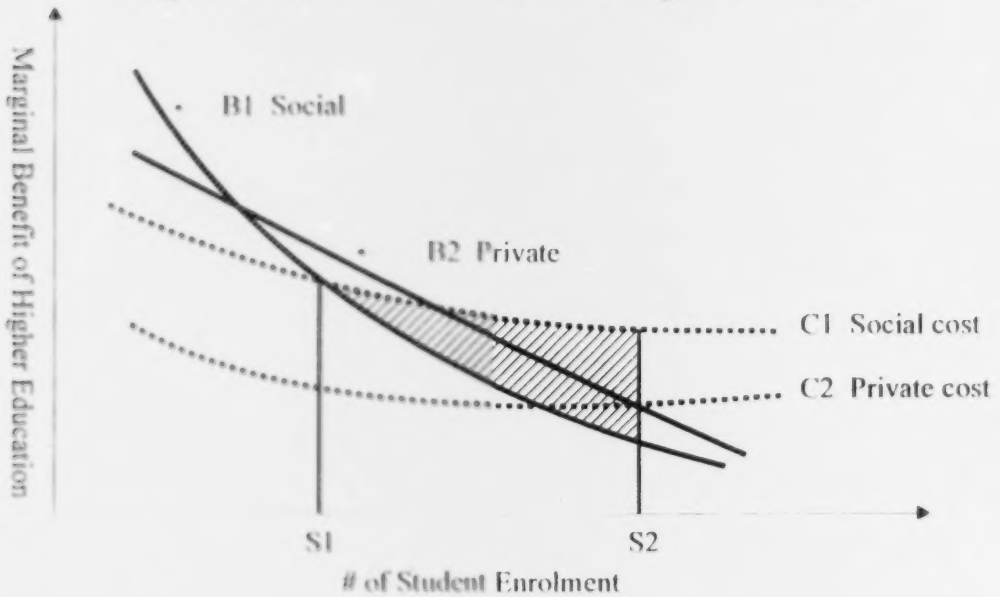
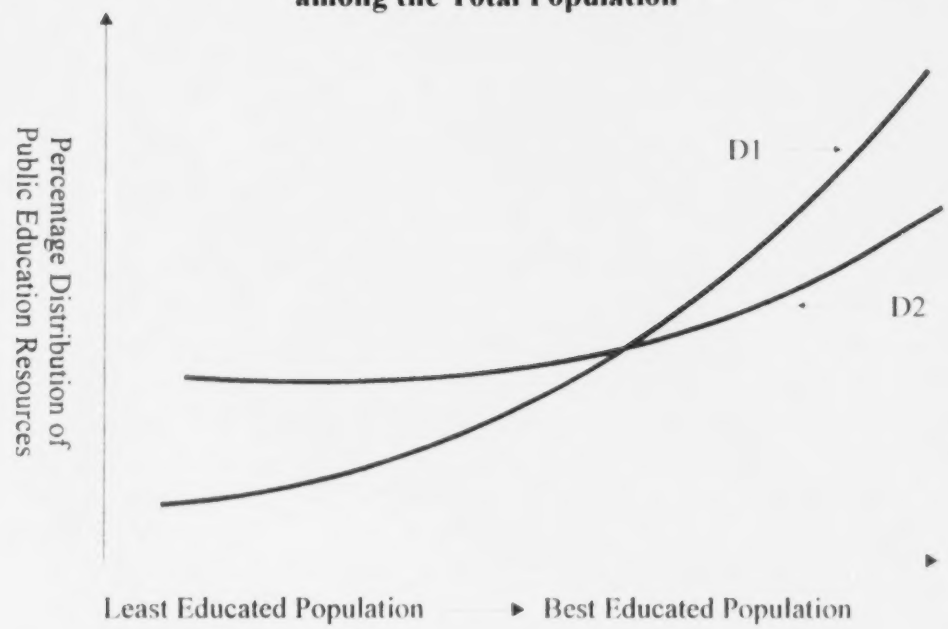


Figure 4. Distribution of Public Education Resources among the Total Population



D1 -- Distribution without cost recovery policies.
D2 -- Distribution with cost recovery policies.

■ The Core of Chinese Higher Education Reform: Curriculum and Instruction

If the reform in governance and finance is the key to the Chinese higher education development in the coming century, the reform in teaching and learning is the core of reform. The basic structure of the current curriculum and instruction scheme were formed and evolved in the past forty years based on the rationale of the central planned economy, in which students were enrolled, trained, and allocated as elements of production of the planned economy. It was characterized by an over-specialization. In mid 1980s before the reform, the higher education in China was divided into more than 1400 specialties. For example, instead of a programme of mechanical engineering, there were specialties in light industry machinery, heavy industry machinery, chemical industry machinery, petroleum industry machinery, metallurgical industry machinery, agricultural machinery, mining machinery, etc. Students were usually locked into a very narrow specialization, had little autonomy in what to learn in school and what to do after graduation, and had little flexibility and adaptability to the technologically and economically induced changes. Even in the period of planned economy, this over-specialization resulted in a wastage of skills and expertise. For example, in a province in Southwest China, a survey of 100,000 college graduates showed that more than 40 per cent of them held jobs unrelated their professional training.

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As Chinese economy was transformed from the ossified centrally planned system into a dynamic market system, the rapidly changing labour market needs and accelerated rate of renewal of production technology and work process called for a more competitive, and more flexible and adaptive labour force. Therefore, it is absolutely necessary and imperative to implement reforms to broaden the specialization of students to increase their flexibility and adaptability. More emphasis should be given to a wider knowledge base, especially the basic theories, basic knowledge and basic skills through more general education. Not only the specialties need to be broadened, such as the over-specialized machinery programmes merged into a more general mechanical engineering programme, interdisciplinary studies should also be encouraged so that the students in humanities and social sciences should have basic knowledge in science, mathematics and informatics, while students in science and engineering should acquire basic knowledge in humanities and social sciences to better understand how to better serve the socio-economic development with what they learn at school. Since mid 1980s, the curriculum and instruction scheme have been changed by combining the narrow specialties to broaden the fields of studies for students. The total number of specialties was reduced from more than 1400 to about 500 now. Further reform along this direction is urgently needed.

Broadening curriculum should be coupled with the reform in teaching and learning process, which should mark a shift of emphasis from the memorization of factual knowledge to the cultivation of students' ability in creative and critical thinking, problem-solving and information acquisition and generation, and intellectual independence. The economic transition, the rapid changing world, the dramatic increase in human knowledge accumulation, and the revolution of information technology changed the way of teaching and learning. Young people should not only acquire the existing knowledge, they should also develop the ability to explore and project what will happen in the future. Thus more heuristic and participatory method of teaching should be further developed. Young people should not be trained for short term jobs but be assisted to develop ability to cope with new learning challenges throughout their life. Facing the challenge of the 21st century, university should not only develop young generation intellectually, but also morally, physically, aesthetically and polytechnically. The education quality of students in humanistic aspects should be paralleled with the scientific aspects. Given the tendency in Chinese higher education which over emphasizes the intellectual development of students and ignores other aspects, there is a tremendous task in reforming curriculum and

Talking about higher education and socioeconomic development in the 21st century, one has to talk about science and technology. It is widely acknowledged that science and technology play a critical role as sources of economic productivity and competitiveness in the current international economy. Along with the steps of the world towards the 21st century, the rapid development of information technology and their application, has been revolutionizing the international economy. With the enormous change in the world economy toward an information-based system, universities appear to become even more crucial to economic growth and social development. This certainly has profound policy implications for the functioning of higher education system.

To fully comprehend the role of universities in the 21st century, one has to understand the major characteristics of the information economy. In the information age, the major source of higher productivity and economic growth lies in the better integration of information generation, processing, dissemination and application. Not only will the information industry become the largest industry (It is estimated that the output value of the world information industry was US$ 237 billion in 1982, US$ 470 billion in 1988, and will exceed US$ 1000 billion in 2000), the information technology will also stimulate economic growth through its application in other sectors. The traditional manufacture, agriculture, and services will only perform well with application of the high-tech based information system. As economies become more complex, as consumption tastes worldwide become more varied, and as competition increases, new knowledge and information become more critical to the production and realization process (Carnoy 1992). The information technology will also transform the production and management activities more and more into symbol manipulation process. Thus the quality of information and the efficiency of acquiring it will become the strategic factors in both competitiveness and productivity for firms and countries.

The mission and role of the university in the new information age of the 21st century will be more significant. Universities, as knowledge based institutions, appear to become even more crucial to economic growth and social development, which has to be understood according to the three interrelated basic functions of the modern universities: Teaching, research, and service. One of the important aspects of teaching involves a process of knowledge and information dissemination, research is information generation and processing, services are information dissemination and application. This means that universities are that kind of the knowledge based institutions that have the position to integrate information generation, processing, dissemination and application. Therefore, as argued by Castells (1991) that if knowledge and information are the electricity of the new information economy, universities are one of the power sources on which the new development process in the 21st century has to rely. This proposition has been supported by the developmental accomplishments of the information economy in the developed

universities are that kind of the knowledge based institutions that have the position to integrate information generation, processing, dissemination and application. Therefore, as argued by Castells (1991) that if knowledge and information are the electricity of the new information economy, universities are one of the power sources on which the new development process in the 21st century has to rely. This proposition has been supported by the developmental accomplishments of the information economy in the developed countries, such as the development of the Silicon Valley in the United States. Similar developmental phenomena can also be observed in many other places around the world.

In China, the Founder Corporation of Peking University maybe one of the cases of this type of development, which integrated long-term basic research, applied research, training, development, testing, production, marketing, customer services. The upper reaches of this system are the National Key Laboratory of Text Processing Technology; and the Institute of Computer Science and Technology of Peking University, the middle reaches are the National Engineering Research Center for Electronic Publishing Technology and the Founder' Research Institute; and the lower reach is the Founder Corporation. Its major technological innovation and commercialization are the laser-computer technology for typesetting and publishing system for newspaper in Chinese language, which has occupied 80 per cent of the domestic market in China, and about 90 per cent of the market share in the world as well. At present its business and products cover a wide area from computer software, hardware, to finance. Its business volume increased from 500 million Yuan in 1992 to 1 billion in 1993, 2 billion in 1994, 3 billion in 1995 and 4 billion in 1996, becoming the largest university-affiliated high-tech enterprise in China. Peking University's Founder not only contributed directly to social and economic development of the country, it also supports the university's teaching and research significantly as a feedback. Not only did the financial return help Peking University, but the participation of the faculty members and graduate students based on their expertise, research agenda, and learning needs in the R&D work and the production and commercialization process enabled them be better aware of the social and economic needs, acquire inspiration for further research, and develop more relevant and updated curriculum, thus making the university stronger, while strong universities will further promote development. It is in this sense that the modern research university is called "**engine of development in the new world economy**" (Castells 1991). This does not mean that we will transform universities into business establishments, but only means universities will play a more critical role in the socioeconomic development of the 21st century.

■ Promoting International Co-operation among Universities

China's accomplishments in implementation of reform and opening up to the outside world support the proposition that no country can well develop and prosper if it isolates itself from the other parts of the world. This is especially true in the information age. The new information economy is international by nature. As mentioned earlier, in today's world, capital, production, management, markets, labour, information, and technology are organized across national boundaries. International trade becomes more important. In the past thirty years, the rate of increase of international trade has been always higher than the growth rate of total world output value. The even more important phenomenon is that a national economy will increasingly become a unit of the information-based world economic system. Therefore, along with the reform and opening up, Chinese economy has also become more and more internationalized. An omnidirectional pattern of openness was established with first opening of coastal areas and the setting up of special economic zones in the east, as well as opening up of river basins, border and inland areas. China's international economic co-operation and trade have maintained a healthy growth momentum with international trade increasing at about 15 percent a year on average over the past 18 years, a rate higher not only than that of the GDP, but also higher than that of world trade growth over the same period. According the State Planning Commission (Chen 1997), in 1996, the total volume of imports and exports reached US$ 290 billion. Foreign currency reserves at the end of the year amounted to US$ 105 billion. The exchange rates of Chinese currency Renminbi against other currencies remained fairly stable. The amount of foreign capital actually used over the year was US$ 42.3 billion an increase of 12.2 percent over the previous year. Since early 1980s, the total amount of foreign investment in China reached US$ 350 billion. Chinese economy is becoming an integral part of the world economy.

As China is integrated into the global economic system, Chinese universities also become more internationalized. Hundreds of thousands of students and scholars went to study abroad, more and more academic exchange programmes and joint research programmes were set up across national boundaries, numerous international education conferences and workshops are held each year in China. With the application of the information technology, especially the computer network, i.e. CERNET (China Education and Research Network), which is interconnected with the INTERNET, to the higher education sector, international communication and co-operation of higher education has become an irresistible wave. Internationally oriented programmes have account an increasing proportion of the curriculum. Programmes like international studies, foreign languages, international relations, international economics, world trade, international commerce, international politics, world history, international law, international business administration, cross cultural studies, etc., have become more and more popular in Chinese universities. The returned students from abroad as new blood with new knowledge, new

ideas, new academic approach, together with the locally trained students, have formed a new generation of the faculty and made significant contributions in upgrading Chinese higher education. International atmosphere is gradually formed in many Chinese universities today. For example, Peking University now has 130 sister universities across the world, and every year there are more than two thousand international students studied on its campus. It is fully recognized that a country can not prosper if isolated from the world, and similarly, a university can not fully develop if it is isolated from the international community. Since the world in increasingly become a smaller global village, we need do our best to promote the mutual understanding, friendship and co-operation with higher education institutions in other countries, in order to upgrade the Chinese universities to the level of world class universities, and contribute to the development and prosperity of the world as well.

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Theme Papers

The Operational Mechanism of Higher Education in the Western Market Economies and Its Use for Reference in Higher Education Reform in Transition towards Market Economies in Asia[1]

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■ The Operational Mechanism of Higher Education in the Western Market Economies

One of the interesting phenomenon occurring in education circles today is the heated debate on the introduction of the market forces into operation mechanism of higher education not only by economies in transition toward market economies where economies lacked of vitality due to the rigidity of severe central planning and need to seek dynamic forces from the market mechanism, but also by the West where the market system originated from and has been existed and existing for hundreds of years and the higher education system was and still is part of it. So, the questions naturally raised are: What is the operational mechanism of higher education in the Western market economies? Is it a market mechanism or something else? What is the use for reference in higher education reform in transition economies where the economic planning considerably relaxed and more and more market elements introduced in the last decade, is seeking the best way for

1. **Note**: The views expressed are those of the author and do not necessarily commit UNESCO

an ideal combination of national planning and co-ordination at the macro level with an increasing role played by a market mechanism and the higher education system faces serious challenges in coping with the new situation.

Although the specific mechanism of higher education in the Western countries may vary a great deal, due to different political, economic, cultural, religious and even ethnic background, one can still find four major parts common, which are composed of the mechanism with more or less the same role in almost every Western market economy. These four parts are:

1. The State

The 'State' here includes not only the government but also the legislature and judicial system as well. The functions of the state mainly include:

a) Keeping the political direction of education in the interests of the Nation. **The National Defense Education Act in the U.S. is a good example**. Historically, the federal role in education grew slowly, in as much as the U.S. Constitution does not even mention education as a responsibility of the national government. Beginning with the Northwest Ordinance of 1788, however, which specifically set aside territorial lands for educational facilities, the U.S. Federal government has evolved a specific but still limited pattern of support. The shock of the Sputnik made the politicians realize the strategic importance of education in winning the battle in the Cold War and this may be one of the main reasons why the money for education spent by the U.S. government and laws concerned passed by the Congress since then are more than that in any period of U.S. history. The Act above stipulated that education must be closely related to national security, in order to face the challenge brought by the Sputnik.

b) Determining the priority and taking corresponding measures of strategic importance to ensure its fulfillment.

Since the 60's, many western nations put priority on the expansion of Post-secondary education and it's diversification, while raising the proportion of GNP for education steadily. Up to 1970, the leading OECD countries like the U.S., the U.K., Japan, France, Germany, reached and exceeded the goal, 4% of the GNP distributed to education, set by the expert group at the first inter-governmental conference on education investment and national policies held in Washington, August 1961, at which OECD officially established the goal of mass higher education within 15 or less years. From mid 70's on, passing the peak of the so called "Baby boom" and facing severe economic recession, the policy priority of many OECD countries moved on from the quantitative aspect to the qualitative

aspect of education and higher education in particular, dealing with the scrutiny of educational finance, for example, encouraged earlier retirement of professors and spending additional money for the recruitment of "New Blood".

c) Co-ordinating the scale, speed and distribution of higher education by increasing or reducing educational budgets, stipulating numerous clauses for some most competitive fields of study and investing more money in more needed areas to keep a balance between different regions. For example, A British University vice-chancellor may have the autonomy to open a new field of study, but at the same time, he may not be able to do so, if the then UGC and present UFC, gave no money.

It seems common that the role of state generally lies in the three dimensions described above and the major means used by the state to insure it as the rule maker and promoter of the game in higher education, whether it is a federal or centralized system, are legislation, appropriation and often the combination of the two, although the general rule is that a centralized system has more control than that in a federal system.

2. *The Market*

Leaving aside the question about whether the higher education operational mechanism in market economies is a market one or not, one fact accepted by all is that the market plays a very important role in the operation of higher education through the labor market in influencing the quantity and quality aspects of post-compulsory education, directly or indirectly. In the finance of public sector higher education in those countries, the state appropriation formula may vary from country to country or even from state to state within one country, but a common determent factor is the enrollment of institutions. It is one of the several key areas where severe competition occurs and the Market plays its role. The candidates, the young men and women, would take into account first the future employment prospects for study of discipline in the labor market and the reputation of the diploma provided by an individual institution he or she is going to choose and then select an individual institution for preparation of their future careers. This is what we called "vote by foot of students".

One example was in the U.S. in 70's when 260 new institutions opened and 144 old institutions closed down, due to lack of students. One of the advantages of the Market mechanism is that the pressure from market competition would force the institutions to adapt and respond to the needs and requirements of a variety of clients, to improve the efficiency of management, the quality of education, and the reputation of the institution to quickly and properly attract students. Of course, no one would deny the disadvantage of the market mechanism which can cause many problems like waste of resources,

unemployment and low quality etc. In one way or the other, it functions spontaneously, as an "invisible hand". One should be ready to deal with the disadvantaged aspect when you want to use market forces to solve problems, especially at the macro level, which requires state intervention for help. So, it is justified here to believe that the role of market adjustment and proper state intervention can and should be complementary.

3. Social Participation

Social Participation is a very important part of the operational mechanism in higher education in the Western Market Economies, which have grown up since the 60's and became the third force, in addition to the State and the Market, to control and influence education development. 'Social forces' here include the employers, the trade unions, the parents and the students and their organizations concerned, etc. Here again, the extent, scope and the means of their functioning can vary a great deal from country to country or from region to region, but, generally, social participation involves in the following areas:

a) Decision and policy making. It is already a common practice in those countries to involve representatives from all walks of life, especially people from the employer's and employee's side, in important policy and decision making concerned at either national or institutional level. A typical example of this kind can be taken from Japan where the industry is always an active force to push forward educational reform in Japan. During the period of 1955-1975 alone, as much as 15 reports on education reform were put forward by industry. One feature in the changing of the UGC into UFC in U.K. in 80s was to increase the representatives of industry and commerce within the so called "buffer body" from 3 to 6, to give them more say in the allocation of funds.

b) Direct participation in the management of higher education. It is a tradition in the Western market economies to include influential figures, including so called layman into the Board of Trustees in the U.S. for example. But since the 60's, legal steps have been taken in many OECD countries to stipulate specifically the proportion of representation of various social forces inside and outside the campuses in the University Senate, the Board of Trustees and other important committees. In Austria, even the election procedure of parents and students representatives for a class was stipulated in the law concerned.

c) Direct participation in design and evaluation of the curriculum. One way is to take part in various academic committees in the campuses. The other is through the guild system of various trade associations to influence, directly or indirectly, the quantitative and qualitative aspect of enrollment, curriculum, teaching standard and evaluation, mainly through accrediting institutions and issuing of the

job license to graduates. It is a guarantee for quality control and forcing the institution to adapt to the real life, but it is not a secret that it sometimes hide some trade protectionism here.

4. *The Institution of Higher Education*

It is not difficult now to imagine what is the whole framework, in which the institution of higher education in the western market economies to operate after a brief description of the role of the state, the market and social participation. That is: on the one hand, the Institution, pushed by "Democratization of Education and massification of higher education" with increasing demand, considerable financial support from Government, the market force and the breakthrough in the development of science and technology, has enjoyed a "golden age" since late 50s, and at the same time they have been faced with challenges from increasing States control and intervention, pressure and challenges from the competition on the Market, strong tide of democratization of education, social participation and the rapid progress of science and technology on the other. It is with these variety of pressures, incentives, push forces and constraints that an institution of higher education has to find its own way out. Here, one may raise and have to answer two questions.

a) How much Autonomy now is left for the Institution in this type of operational mechanism? Autonomy is the key to universities for its survival and development. A university without minimum autonomy can be compared to an engine without fuel, but, after reviewing the long history, and the history of the Post-second World War of Universities in particular, it would be not difficult to conclude that the general trend was and still is that the scope of autonomy enjoyed by universities became narrower and narrower and Universities in this battle field retreated step by step now to its final "strong hold" to protect: Teaching and Research. Unfortunately, here too, we found already intervention in different forms and through different channels by government and some other social forces challenging the teacher's traditional academic freedom on what and how to teach and research, even in countries like the U. S. So, autonomy for universities and colleges of the public sector, which dominated most of the OECD countries may mean mainly the power of implementation and flexibility at certain extent to cope with the changing social environment. Certainly, institutions in the private sector enjoy more autonomy than that in the public sector, but they cannot avoid being challenged by the fact that use of the proportion of money from the government in various forms, now accounting for about 15-20 per cent of the total budget of private institutions in the U.S. and Japan, two countries with a big private sector, should meet conditions set by donors on the one hand and they are controlled by the Board of Trustees, which represent forces outside the campuses.

b) The second question to be answered is, is the institution still dynamic and flexible enough to respond to the outside changing world? The answer is affirmative, but the dynamism and vitality come from the interaction between the pressures, challenges, incentives and forces from the government, market and variety of social groups and the autonomy still enjoyed at certain extent by the institutions, rather than from institutional autonomy alone. It is really a misunderstanding among some higher education colleagues in transition economies that an institution in the West is an entity independent of all and able to decide everything by themselves and it should be the model to follow in the transition process.

There may be many reasons for the formulation of this kind of mechanism in the Market Economies, but mainly they are as follows:

- To remedy the imperfections of the market mechanism, state intervention has been introduced in the economies and its related areas like higher education serving as a major source of human resources in almost every Western countries since late 20's based on the economic theory of Keynes.
- The requirement of the educational mechanism itself. In the so called 'Education Market', there is no accountability for cost-effectiveness in monetary terms like that in a commercial market; since graduates are not for or on sale. Higher education institutions, including that in the private sector, are not making direct profits as a main target by teaching and training of students, which is prohibited by law in many countries. But, higher education today has become a big industry at the national and local level almost everywhere and costs a big share of the national and local budget. The market itself cannot solve problems like big wastage. It naturally causes concern of tax-payers and their representatives. Therefore, proper intervention of Government and social participation is justified.
- In addition to its traditions, one of the reasons for the faster spread of the wide-range of social participation in higher education affairs since the 60's has been the result of the Civil Rights and Student Movement spread almost in the whole Western World. The U.S. Higher Education Act of 1965 and the French Higher Education Orientation Act of 1968 are examples as results of actions taken under the pressure by the then political and student movements.

Now, it may be the proper time to try to answer the fundamental question raised at the beginning: Is the Operational Mechanism of Higher Education in the western market economies a market one or something else? In my view, the answer is basically No, it is basically not a market mechanism but a "mixture", a dynamic "combination" of the four parts composed of the mechanism, where some market means are utilized in certain fields and at certain stage, but the market dominates

mainly in or has important impact on enrollment and graduates employment, for example, but not on all; and every part of the four has its own function complementing and constraining each other and moving in the direction co-ordinated by the State and compromised by all. One cannot ignore any part of the four and any part cannot be separated from the other. This is not only the product of the long range development of the western democratic society and its value, but also a reflection and result of the development of the social productivity and civilization of human beings. That is why it is justified to think that experience and lessons here can be shared by and relevant to transition economies in their adoption of strategies and policies in higher education reform process.

■ Major Problems and Challenges Facing the Reform of the Operational Mechanism of Higher Education in Transition Economies

I was surprised to find from my two-week survey on higher education in Cambodia in November 1993 that the problems and challenges facing higher education there have been so similar to that in other socialist or former socialist countries, although Cambodia adopted the socialist system for only about 10 years. Jan Sadlak in his paper "Legacy and Change-reform of higher education and restoration of the academic work in Romania", March 1993, described the principle features in higher education in Romania before 1989 in the following way:

- *higher education was not only a functional instrument for academic and professional training and development but also a place for political formation within a dominant ideological doctrine of Marxism-Leninism;*
- *student enrollment and graduate employment were strictly correlated to centrally established manpower plans;*
- *teaching and research activities of higher education institutions were part of centrally-determined plans in which academic interests were correlated with the economic interests and ideological indications of the party and bureaucratic decisions of the state administration;*
- *the institutional structure of higher education included a separation of major groups of disciplines while their governance was controlled and co-ordinated with policy objectives by central political and state bodies;*
- *research activities were narrowly application-oriented;*

- *academic nominations and*, to some extent, also higher academic degrees, *required the final approval of the central accrediting body* which took into account academic as well as political criteria;
- *institutionalization of the party's controlling powers*, by making a majority of the positions in the governing bodies of the academic institutions and other bodies involved in academic matters part of the "nomenclature" system;
- *political control over academics* who were members of the party through their adherence to a principle of the party's discipline call "democratic centralism",
- collective autonomy of academics and students was limited and supervised by the political organization; and
- *international relations of academic institutions and individual scholars were closely co-ordinated and supervised by political as well as state bodies*.

The above characteristic features could be identified more or less in practically all socialist or former socialist countries of not only East and Central Europe, but also in Asia and else where.

The majority of the transition economies were not the inventor of the modern university system but copied it from either the West or the former Soviet Union in the past 100 years or so. The major disadvantages of the operational mechanism of higher education under this system has been lack of dynamism and vitality. Its malpractice have been mainly demonstrated as follows:

- Higher education institutions lack of motivation and sense of responsibility to take initiative to do something new but wait for and strictly follow the instruction from the government for and in everything. For example, waiting every year to be informed on the enrollment quotas and for necessary fund and equipment to be supplied. The institution has no worry about the enrollment and no worry either about the employment prospect of their graduates since all this is the responsibility of the government. However, beginning from recent years, the institutions have been facing increasing pressures and challenges from the changing economic system and fluctuation of supply and demand of graduates on the open but still limited labor market, influenced by economic ups and downs, but the pressures and challenges are not yet strong enough as much as that in the market economies, to force the institutions to make effective and timely response to changing needs of the society, let along to close down.
- Higher education Institutions are just appendages affiliated to administrative authority, which intervene in many of the micro-level institutional decisions via direct or indirect means. An institution lacking of minimum autonomy, has neither motivation, nor ability to make responses to the changing World, for example, by accepting new

educational philosophy, readjusting the curriculum structure, innovating teaching content and methods, in order to give the students more flexibility, marketability, trainability and so on. Because of the same reason, potential wastage often occurs in some institutions where facilities and buildings are not fully utilized.

- The separation of the institutions from the social and productive life. The reason is not complicated here: the institutions as well as the society as a whole have neither interest nor motivation to establish direct linkage between them because both meet its own needs through the state planning. Enterprises and companies getting graduates according to the state plan without any duty, are certainly not interested in education, while higher education institutions having no worry about the employment of their graduates of high or low quality which are guaranteed by the state, can survive and, therefore, are not concerned about what kind of graduates the enterprise and company really require.

One must admit that in the last decade, almost all transition economies have carried out a series of reform experiments in a variety of fields of higher education to remedy these mechanism imperfections. Relaxing the central control over institutional management, allowing institutions to enroll sponsored students and self-financed students in a proportion stipulated by the state, giving the decision making to institutions in signing research contracts with outside partners, even opening up enterprises to develop new products with its own technology are some of the examples. However, these steps have not been strong enough to overcome the fundamental shortcomings in the mechanism, a legacy of the former Soviet model and to make higher education institutions as much efficient and flexible as expected to cope with the changing economic, scientific and technological and personnel systems. It seems a long and extremely complicated process to search for a suitable operational mechanism of higher education in the transition period from a centralized planned economy to a market oriented one. In this process, one cannot avoid answering following questions which, I believe, are relevant and fundamental for all policy makers in transition process:

- What should be the new educational mechanism to be established?
- Is the four part composition of the higher education mechanism in the Western market economies a good reference for transition economies?
- Should some market elements or means be introduced into the higher education mechanism in some fields?
- What is the balance to be maintained between the four parts and between the state intervention and institutional autonomy in particular?

■ Possible Answers from the Comparative Point of View

Reform had never been an easy course in any country in human history. A successful reform requires some minimum conditions, including the political will of the leaders and the people and a wise reform strategy. The reform experience in the past 40 years and last 10 years in particular proved that one sided reform of a social system without touching upon its whole mechanism cannot succeed. The attempts for decentralization of administration in China before 80's was a good example, which always led to a vicious circle: decentralization – > disorder – > centralization again – > rigidity – > decentralization, a rule reflected not only in the economic reform, but also in the educational reform many times. So, to push forward the reform, one should start by making changes in the macro level mechanism, as key to the whole process. It is my view that we have no reason not to accept the four part mechanism as important reference for use in building our own higher education operation mechanism in transition economies. The challenge facing here is to have a clear picture of your national characteristics in your mind and then formulate carefully your specific strategies to plant it in your different national context.

1. No doubt, the state intervention should be kept. What was wrong in the past was not the state intervention itself but the undue and over-intervention, taking in hand many responsibilities which should be and may be done better by the higher education institutions themselves, which was the real reason why many attempts for streamlining of centralized administration always ended in failure. The solution is not difficult to find: concentrate the attention of the central administration at macro level coordination mainly through indirect means and reduce step by step and finally withdraw the micro-level interference in institutional management.

2. Some market elements seem necessary to be introduced into higher education operational mechanism in order to make the institutions dynamic and able to tap their potential, while keeping under planning control some fields of special importance, which will not be realized by directives as before, but by financial and legal means. The areas where planning proved a failure or government has no ability to intervene could be the first target for introducing a role of market by, for example, relaxing the enrollment quotas system, gradual lifting graduate job guarantee system, charging tuition fees with new scholarship programme to ensure equity, encouraging entrepreneur activities, allocating public funds through bidding for examples. One successful story in using financial means in recent years has been the amalgamation of higher education institutions in Australia since 1988.

3. The social participation should be established to ensure close linkage between higher education institutions and social reality and many forms of that in the West can be used for reference. I believe that the need for talented people and interests in education of the enterprise directors and company managers would be growing, along with the deepening of economic reform and as competition becomes acute on the home and international market. Here, industry-university partnership should be the top priority on the agenda.

4. Minimum autonomy must be ensured to institutions to enable them to make timely and proper response to the changing outside world. For this purpose, the institutions should have the decision making power in areas such as enrolling the sponsored and self-financed students, providing educational services for variety of the social clientele under the condition of fulfilling the targets set by the state; Allocation of the resources from both the state and other non-governmental sources; Employing professors and staff, restructuring of institutional management and appointment of managerial staff below deputy president; Adjusting and restructuring curriculum and courses, compiling and choosing textbooks; Participation in co-operation with industry and business for contract research, involving in development of new products and new technology, enterprises and business activities under the condition of fulfilling the research contracts signed with the state and guidance of law and regulations; participating in regional and International co-operation and academic exchange, etc.

■ Concluding Statement

When we talk about learning something from other nations or systems, remembering one teaching of Yanze, an ancient philosopher, born in China in the period of the warring States, B.C., may be helpful. He said that the orange tree planted in the south of Huehe River becomes the orange, but it becomes something else when planted north of the river. Why? Simply because the water and soil are different. It is justified, I believe, to consider the four part composition to be used as a reference in the formation of a new higher education operational mechanism in the newly formulating market-oriented economies. However, it should not be a copy but that with your own national characteristics on your own soil.

The formulation and function of the four part operational mechanism of higher education must be a dynamic, rather than static process, where the pendulum will certainly change its direction from time to time, depending on the changing situation and national context as professor Burton Clerk once summed up that the general rule is: one would rotate to utilize the means of planning when the means of market failed and vice versa.

Experiment first. The experiences in the reform process in socialist or former socialist countries in the last two decades have shown that hasty speeding up of the reform process could lead to disorder or failure and ruin the reform itself. So, it can be useful to remember: "look before you leap" – Experiment first since there is no ready-made prepared answer to all the questions being raised from the reform process in socialist or former socialist countries, which used to be established basically against market mechanism and system but now turn to it for way out, a real unprecedented event in the history of human kind.

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Some Features of Higher Education in the Market Economies: The Case of SEAMEO Member Countries

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■ Introduction

SEAMEO (Southeast Asian Ministers of Education Organization) members consist of 9 countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand and Viet Nam. SEAMEO was established in 1965 to promote regional understanding and co-operation in science, education and culture. Of the nine countries, three are considered to be in transitional economies: Cambodia, Lao PDR, and Viet Nam[1]. Singapore is one of the four Asian tigers. The rest is joining the industrializing Asian nations. They are market-oriented economies.

Features of higher education discussed in this paper include the following concepts: (1) relevance of higher education, (2) private higher education, and (4) internationalization of higher education. References will be made to the experiences of SEAMEO member countries. Efforts by SEAMEO RIHED in promoting economics teaching and training for transitional economies will also be presented.

1. Seiji F. Naya and Joseph L.H. Tan, *Asian Transitional Economies*. Singapore, Institute of Southeast Asian Studies, 1995, p.9.

■ Some Features of Higher Education

1. Relevance of Higher Education

In market economies, relevance could refer to the role of higher education in meeting the needs of market economies. As countries are developing their economies, there are great needs to prepare professional and managerial manpower. Dato Nuraizah bt Abdul Hamid, Former RIHED Governing Board Member from Malaysia referred to this as follows:

> *Relevance in higher education and training in the context of the SEAMEO region should, among other things, address the need to establish an increasingly larger pool of high level professional and managerial manpower as well as middle-level personnel with technical and management skills. In other words, apart from the quantitative expansion, relevance must be in terms of matching the region's particular manpower needs. In the case of Malaysia, relevance, among other things, refers to matching the supply and demand for manpower in areas such as science and technology and management at both the professional and semi-professional level*[2].

Following are areas in which higher education plays crucial and relevant roles:

a) Science and Technology

Manpower needs in science and technology are a priority in developing economies. In Malaysia, it is estimated that by the year 2000 about 56,000 engineers are required compared to the stock of 26,500 engineers in 1990. The government has given special emphasis to increasing the capacity for science, engineering and technical related courses[3]. In Indonesia, enrollments in science and technology accounted for 33 per cent in 1995. It is planned to increase to 42 per cent by the year 2000 and 50 per cent by the year 2005[4]. In Thailand, 14 areas in science and technology have been declared as shortage areas. They are:

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2. Dato Nuraizah bt Abdul Hamid, *Relevance in Higher Education and Training in A Changing Environment*, A paper presented at the Third RIHED Governing Board Meeting, Suranaree University of Technology, Thailand, 25-26 July 1995.

3. First SEAMEO - UNESCO PROAP Regional Conference on Higher Education. *Reengineering of Higher Education for the 21st Century : Country Report*, Penang, Malaysia, 9 July 1996, Malaysia, p. 11.

4. _____ Indonesia, p. 11.

- engineering and petrochemistry, veterinary medicine,
- dentistry, medicine, pharmaceutical science,
- nursing, architecture, agro-industry,
- industrial education, computer science, mathematics, and
- medical technology, sciences, gems and jewelry sciences[5].

In Singapore, the policy to increase engineers and technicians started as early as the 1980s when the main problem of higher education shifted from excess demand for university places to being able to produce enough engineers and technicians[6]. This indicates the important role of higher education in meeting manpower requirements in science and technology.

In fact, the ASEAN Heads of Government have declared one of the directives for ASEAN:

> *ASEAN shall continue to develop human resources in science and technology to cope with the pace of scientific and technological advancement, as a means to attain and sustain a competitive edge in the international economic arena*[7].

b) Economics and Management Education

In the early 1970s, RIHED organized a workshop on "Role of Universities in Management Education for National Development in Southeast Asia". The participants of the workshop concluded that management was a crucial — if not the most critical — element in achieving economic and social development. Two areas of management were recommended for particular emphasis, namely, (a) the management of public enterprises, and (b) offering management guidance and training opportunities to small-scale entrepreneurs[8].

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5. _____ Thailand, p. 5.

6. Martin Carno "University, Technological Change, and Training in the Information Age" in *Revitalizing Higher Education*, edited by Jamil Salami and Andriaan M. Verspoor, UK : IAU Press, 1994, p. 69.

7. *Directives of the Fifth ASEAN Summit on Social Development*, December 1995.

8. Yip Yat Hoong, ed., *Role of Universities in Management Education for National Development in Southeast Asia*, RIHED, Singapore, 1972, p. 323.

Today, economics and management education is much more crucial, particularly in the world of competition. Schools of business administration are found in most universities and colleges. Programmes in international business and management are proliferating. Governments adopt the policy to give special emphasis on management training such as the matching of supply and demand for manpower in management, as in Malaysia as mentioned earlier. In Thailand, accountancy and languages are declared as shortage areas which are entitled for government support. For the management of small-scale enterprises, the ASEAN Subcommittee on Education (ASCOE) has just endorsed the project. The objective is to cooperate in human resource development for small and medium enterprises in the ASEAN region. Expected outcomes are:

1. The increase on the number of trained personnel in each participating country.
2. A curriculum for ASEAN entrepreneurship will be developed.
3. Linkages between agencies responsible for HRD and SMEs to be identified and established.
4. Experiences of SME development among ASEAN countries to be exchanged and publicized.
5. Sustainability of the training courses at various levels of education to be ensured[9].

c) University-industry linkage

University-industry linkage is one of the important features of higher education in market economies. The idea is to make teaching and research relevant to industrial needs. SEAMEO RIHED has cosponsored a series of regional colloquium on this topic with many concerned organizations and institutions.

- Colloquium on Engineering and Technology Education for Southeast Asia in the 21st Century, 9-10 January 1995, Jakarta, Indonesia
- Colloquium on University Industry-Government Co-operation in Quality Engineering and Technology Education, 27-28 July 1995, Suranaree University of Technology, Thailand
- Regional Colloquium on Engineering and Technology Education for the 21st Century, 11-14 February 1997, Suranaree University of Technology, Thailand
- Conference on Science and Technology Education, Kuala Lumpur, Malaysia, 15-16 December 1997.

9 *The Fifth Meeting of the ASEAN Sub-Committee on Education*, Bangkok, 29-30 September 1997, Agenda 7.1.6.

In addition, the international workshop on Modalities of University-Industry Co-operation in the APEC Region was held from 5-7 September 1996, in Pattaya, Thailand. Organized by the Ministry of University Affairs, the goals of the workshop were to present and discuss the country analyses from the nine countries covered by the research project and to stimulate discussions and networking and enhanced university-industry co-operation among the participants of the workshop. The nine countries involved in the research project were Australia, Canada, China, Chinese Taipei, Malaysia, the Philippines, Singapore, Thailand and the U.S.A. One of the strongest recommendations to emerge from the workshop was the need to form a Virtual APEC UIL (University Industry Linkage) Centre[10]. This indicates the need for and the necessity of university-industry linkage in this region.

2. *Private Higher Education*

In market economies, private sectors play an important role. In education itself, the role of private sectors is increasing, particularly in Southeast Asian countries. Large private higher education systems are seen in Indonesia and the Philippines. In Thailand and Malaysia, higher education systems are growing fast. As shown in the following table, the number of private higher education institutions are greater, except in Malaysia. In Indonesia, 95 per cent of higher education institutions are private. These figures do not include institutions of other types. In the Philippines, 80 per cent of the institutions are private. In Thailand, the number of private higher education institutions is increasing. Of the total number of higher education institutions under the supervision of the Ministry of University Affairs, 37 are private colleges and universities. In Malaysia, five private higher education institutions have been established during the last two years.

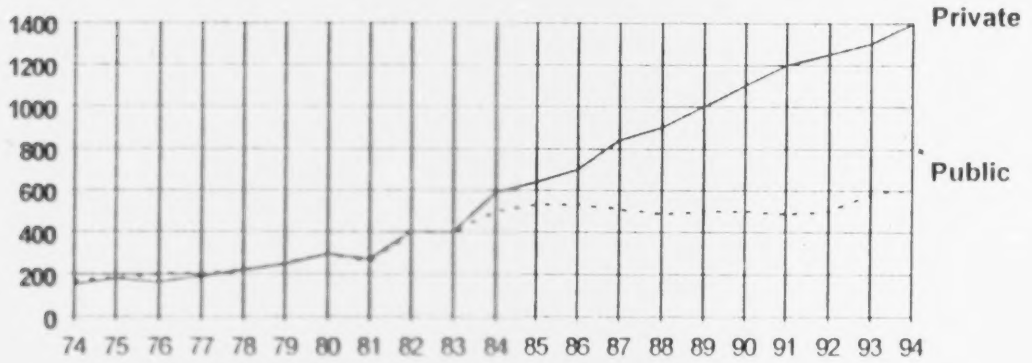
Table 1. Number of Government and Private Higher Education Institutions in Selected Countries in Southeast Asia

Countries	Number of Institutions	
	Government	Private
Indonesia (1994)	76	1,159
Philippines (1995)	235	950
Thailand* (1997)	22	37
Malaysia (1997)	10	5

Source: *Taken from Private Higher Education in Asia and the Pacific, Proceeding of the Seminar organized by UNESCO PROAP and SEAMEO RIHED, Xiamen, 1995.*

10. *RIHED Bulletin*, January 1997, p. 1.

Figure 1. Growth of Student Enrolment in Private Higher Education Institutions in Indonesia (in thousands)



Source: Book of *Data on Public and Private Higher Education in Indonesia 1974-1992 and Annual Reports of the Year 1986-1992*

3 Corporatization

A University could be managed like a corporate. Government universities are being restructured. The idea is to move universities out of bureaucratic control. Universities will be more competitive and efficient. In Malaysia, the government has passed a law on corporatization of government universities. They are now public institutions with a greater degree of institutional autonomy.

In Thailand, the concept of a public autonomous university has been introduced and implemented. The idea is to move universities from the state-controlled status to state-supervised status. Two new universities were chartered under this status. One is Suranaree University of Technology, and the other is Walailak University. A third new university is being considered under this model. For old universities, only one is being considered by the Parliament: King Mongkut's Institute of Technology, Thonburi. It is expected to get the final approval soon.

What are the characteristics of corporate or public autonomous universities? They enjoy greater degree of autonomy. Their governing boards exercise more authority. Their presidents are institutional managers rather than the bureaucratic heads. Management is based on corporate model. Their programmes are more demand-driven, as shown in Table 2.

Table 2. Characteristics of Traditional and New Universities

Dimensions	Traditional	Corporate/Public Autonomous University
Governing Board	Limited authority	Full authority - Budget - NESDB - Civil Service Commission
President/Vice-Chancellor	Bureaucratic head	Institutional manager
Management	Bureaucratic model	Corporate model
Programme	Supply-driven	Demand-driven
Student/Participants	Subsidized	Fee-paying
Source of Income	Government	Multiple sources - Tuition - Income generating
Budgeting	Line-item	Block grant

4. Internationalization of Higher Education

Recognizing the importance of reforming of higher education for the 21st century, the Ministry of Education of Malaysia in co-operation with SEAMEO RIHED, SEAMES and UNESCO PROAP organized the first SEAMEO - UNESCO PROAP Regional Conference on Higher Education for the 21st Century in Penang, Malaysia in July 1996. Participants were from 14 countries: Australia, Brunei Darussalam, Cambodia, China, India, Indonesia, Japan, Kazakstan, Lao PDR, Malaysia, Philippines, Singapore, Thailand, and Viet Nam. Two important recommendations concerning internationalization of higher education were made. They are:

a) That institutions of higher education in the region encourage increasing bilateral co-operation in the areas of students exchange, staff exchange, collaborative research, and enable transfer and adoption of good practice of management innovation.

b) That institutions of higher education in the region identify areas for developing common programmes with a view of enabling credit transfers, accreditation, recognition of degrees, and the award of joint degrees.

In SEAMEO and ASEAN member countries, there are at least 5 intergovernmental and non-governmental organizations responsible for promoting internationalization of higher education. The three intergovernmental bodies are: (1) SEAMEO Regional Centre for Higher Education and Development (RIHED), (2) ASEAN University Network (AUN), and (3) ASEAN Subcommittee on Education (ASCOE). These three organizations are trying to promote staff exchange and student exchange between and among member countries. In fact, ASCOE is trying hard to promote student exchange at secondary schools. Internationalization of higher education becomes important national agenda. The two NGOs are: (1) Association of Southeast Asian Institutions of Higher Learning (ASAIHL) and the Association of Universities in Asia and Pacific (AUAP). In addition, UNESCO PROAP in Bangkok has play an important role in stimulating, initiating, and facilitating collaborative efforts in internationalization of higher education in the region. With the rapid movement of globalization, regional and international collaboration in line with the above recommendations is being carried out. Staff exchange, student exchange, and collaborative efforts in teaching, research and service across borders are being promoted by those organizations.

With the creation of Asia Pacific Economic Co-operation (APEC), a new mechanism has emerged to promote university mobility in this region. This is UMAP (University Mobility in Asia and the Pacific). Many meetings have been organized to lay the framework and mechanism for actual implementation. On 10-11 November 1997, Thailand will host the UMAP Working Party Meeting at Naresuan University in Pitsanulok, Thailand to discuss on credit transfer and implementation plan.

Student mobility becomes a challenge to university teaching. Students will need new skills such as ability to speak regional and international languages, knowledge and understanding of others, and ability to use information technology. The market for graduates is also expanded from national to regional and international boundary.

■ Efforts in Promoting Economics Teaching and Training in the Greater Mekong Subregion

The Greater Mekong Subregion (GMS) consists of territory from six countries: Cambodia, China (Province of Yunnan), Lao PDR, Myanmar, Thailand and Viet Nam. Recognizing the importance of human resource development for transitional economies of this region, SEAMEO RIHED, in co-operation with concerned agencies, have organized many

workshops and seminar on economics teaching and training for transitional economies in the Greater Mekong Subregion

1. On 24-27 June 1995, SEAMEO RIHED in co-operation with Khon Kaen University and with the support of SEAMES and UNDP organized a seminar on the role of universities in the development of the Mekong River Basin. Participants were from the six riparian countries: Cambodia, China (Yunnan), Lao PDR, Myanmar, Thailand and Viet Nam. Also participating were representatives of concerned agencies: ADB, UNDP, UNESCO, SEAMES and others. One of the recommendations of the seminar was to develop economics and management curricula to meet the needs for transitional economies of the GMS.

2. A follow-up activity was organized by SEAMEO RIHED and UNESCO PROAP. On 2-5 April 1996, a Planning Meeting of UNITWIN on Economics Teaching and Training for Transitional Economies in the Greater Mekong Subregion was organized. Participants were from economics education institutions of five countries: Cambodia, China, Lao PDR, Viet Nam, and Thailand.

3. A Workshop on Economics Teaching for Greater Mekong Subregion Economics Educators was organized by Thammasat University from 27 September to 27 October , 1996 with the Support from DTEC, UNESCO PROAP and SEAMEO RIHED. Participants were from economics education institutions of 6 countries: Cambodia, China, Lao PDR, Myanmar, Thailand and Viet Nam.

4. A Regional Seminar on Economic Reform and Economics Teaching and Training for Transitional Economies in the Greater Mekong Subregion was organized and hosted by Yunnan University in co-operation with DTEC, UNESCO PROAP, SEAMEO RIHED and YLESCIG at Yunnan University, Kunming, China, 16-19 April 1997.

Two more activities are to be organized before the end of 1997.

1. A Regional Workshop on Development on Economics Teaching and Training for Transitional Economies will be organized by Khon Kaen University in Thailand from 13-16 December 1997.

2. Thammasat University, in co-operation with DTEC, UNESCO PROAP and SEAMEO RIHED, will organize the Second Workshop on Economics Teaching for the Greater Mekong Subregion Economics Educators in November 1997.

From the presentation, one can see the needs and efforts in making economics teaching and training relevant to current economic situations of the countries in the Greater Mekong Subregion.

At present, SEAMEO RIHED and UNESCO PROAP are working with the Ministry of university Affairs of Thailand in establishing the UNITWIN on Human Resource Development in the Greater Mekong Subregion. The idea is to promote closer co-operation among higher education institutions in the subregion. Network members will be economics education institutions from the six Greater Mekong Subregion countries.

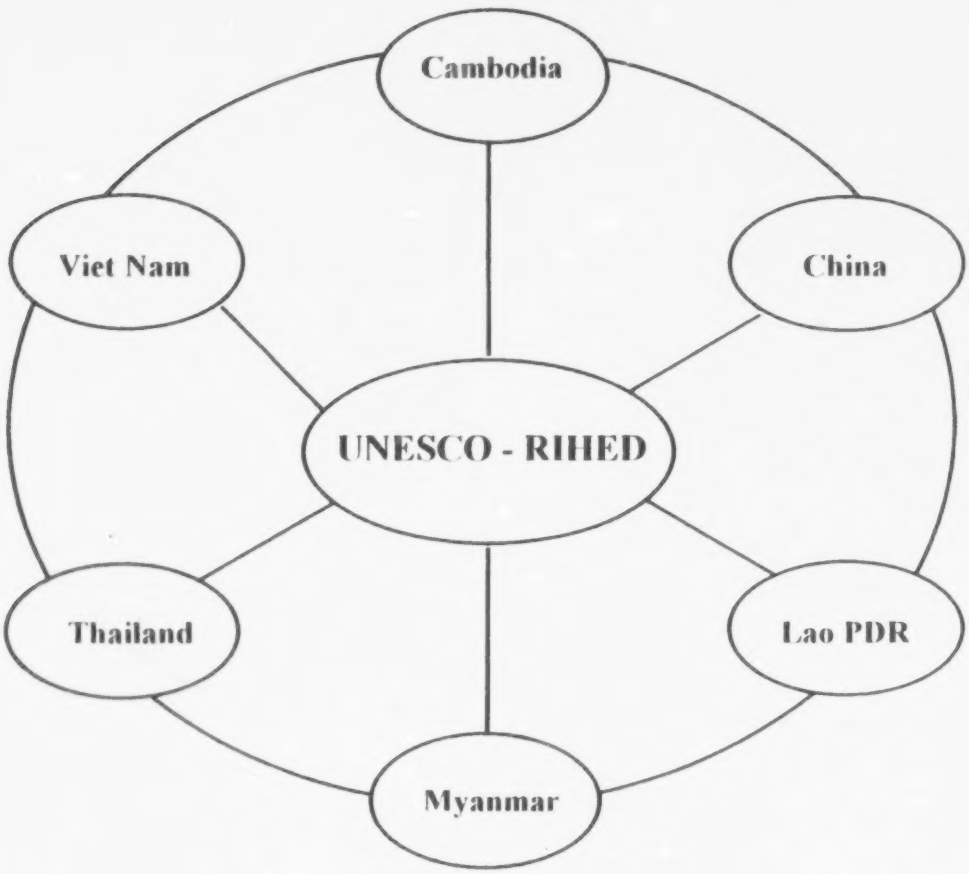


Figure 2.

At the beginning, emphasis will be given to economics and management education. Expansion to other needed areas will be made later. Activities of the network include:

1. exchanging of information;
2. exchanging of staff;
3. exchanging of students;
4. joint research projects;

5. joint production of materials;
6. training programmes; and
7. seminars/workshops/conferences

■ Conclusion

In this paper four features of higher education in Market Economies are discussed, namely relevance of higher education, private higher education, corporatization, and internationalization of higher education. Some aspects of these features are further discussed with reference to the experiences of SEAMEO member countries. Efforts by SEAMEO RIHED and UNESCO PROAP in promoting economics teaching and training for transitional economies are also presented. A UNITWIN on Human Resource Development for the Greater Mekong Subregion is proposed with the emphasis on subregional co-operation on economics teaching and training for transitional economies. The network will contribute to the development of the Greater Mekong Subregion in their transitions toward market economies.

Market Economy and Higher Education Development: The Case of Malaysia[1]

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■ Introduction

This paper will examine Malaysia's relatively rapid economic growth and the role of higher education. Given that the expansion of the economy has contributed to the expanded role of tertiary education, it has also to be acknowledged that the output of university graduates over the years has a tremendous impact on the pattern of the country's economic development. Nevertheless, owing to the relatively slow expansion of university enrolment as against the number of professionally qualified manpower needed, Malaysia's need for a larger pool of well-trained professionals in the key sectors of the economy is still daunting. Thus, the challenges for the political leadership and policy-makers are all the more apparent given the impact of globalization and rapid technological innovations in information technology and other scientific disciplines.

1. The author would like to record his appreciation to Dr. Zahratul Kamar bt. Mahmud (Deputy Director of the Policy and Governance Division in the Department of Higher Education, Ministry of Education) and Puan Hana bt. Sardan of the same Department for their contribution in the preparation of this paper.

With this background, this paper will at the outset briefly examine the relationship between macroeconomic planning, market economy and higher education in the Malaysian context. The following section will highlight the development in higher education with respect to government's budgetary allocation, student enrolment and output of university graduates. The next section will examine important changes in higher education, throwing light on recently introduced strategies including the "corporatization" of universities in Malaysia; the establishment of the National Higher Education Council; increasing enrolment capacities of universities; increasing enrolment of Science and Technology students; and the role of private tertiary education.

■ Macroeconomic Planning, Market Economy and Manpower Requirements

During the last four decades since the country's Independence, Malaysia's economic development has been principally driven by private sector participation in all its economic activities, with the government playing an important role in guiding the private sector by providing appropriate fiscal and monetary incentives. Despite the active role of the latter in ensuring the success of the economy, it was in the main dependent on crucial macroecomic policies initiated by the Malaysian Government. It ought to be emphasized that government budgetary controls as well as development allocations have over the years been instrumental in establishing the pace of development in the country. This has been guided mainly by a succession of Five Year Plans implemented by the government, the latest being the Seventh Malaysia Plan (1996-2000).

The continuous support given by the government to the private sector is also reflected in the "Malaysian Incorporated" concept under which cooperation between the public and private sectors is given high priority in the implementation of development projects. It is the view of the government that such cooperation is critical for Malaysia to achieve a reasonable high rate of economic growth during every Five-Year Plan. As we shall discuss later, this cooperative endeavor is also extended to the higher education sector where the private sector is encouraged to establish new universities and private colleges.

It is also within the context of the Five Year Plans that the basis of the country's manpower requirements is activated through comprehensive macro-planning, including all levels of education, from basic primary education up to tertiary education. While educational planning is subsumed under manpower planning, the former is nevertheless crucial to ensure that the country's manpower requirements are fulfilled adequately. It is in this context that the Ministry of Education plays a critical role in determining the supply of skilled manpower at all technical and professional levels. Thus, according to the Seventh Malaysia Plan (1996-2000):

> *"The education and skill delivery system will be upgraded and reoriented to meet the expanded skill requirements of the economy. Alongside the improvements in the delivery system, more educational and training opportunities will be provided in order to increase the supply of educated and skilled manpower required by the rapidly expanding economy".*

Given that private enterprise is a vital component in determining the level of economic activities in Malaysia, the output of highly skilled manpower from higher educational institutions must be commensurate with market demand at all times. This is indeed a difficult task to perform, particularly in a rapidly changing economic environment as it is to-day; and thus the existence of mismatch between the supply of skills and the demand for them. Therefore, in the Malaysian perspective, the importance of Mid-Term Reviews of the Five Year Plans through which government planners ensure that each Plan's development priorities and allocations could be accordingly modified to suit changing needs. Meanwhile, it is also the function of the Ministry of Education to continuously monitor the situation so that all the universities and other educational institutions are able to respond positively to any changing environment.

■ Higher Education in Malaysia

1. *Budget Allocation*

Higher education has indeed received substantial support in terms of government's involvement; and in this respect, the Ministry of Education has always been playing a major role. As shown in Table 1, the increases in both the operating and development budget allocation are indeed transparent since the early 1990s. This is also indicative of the social responsibility entrusted upon the government to ensure that access to tertiary education is available to as many of the country's citizens. The success of higher education is exemplified in terms of not only via government budget allocation over the Five Year Plans but also via the relatively rapid increase in student enrolment.

Table 1. Budget Allocations for Public Higher Education Institutions (1991-1995)

Year	Operating (RM Million)	Development (RM Million)
1991	861.0	148.6
1992	939.9	484.7
1993	999.3	470.4
1994	1,101.0	430.0
1995	1,218.9	611.7
1996	1,337.0	570.1
1994	1,316.0	734.7

Source: Department of Higher Education

Apart from these indicators, the output of graduates too is another factor that one has to consider. In respect of the latter, Malaysia sends a large number of its undergraduate students overseas, mainly in the English speaking countries such as the United States, United Kingdom and Australia. The bulk of the estimated 60,000 students studying overseas currently are in these countries, although there are also found in other European universities and in Japan as well.

These links have developed not only because of the country's historical connections with such countries but also because of the increasing number of "twinning programmes" developed by many private colleges in Malaysia with their counterparts in the English-speaking countries. These programmes allow a student to undertake his/her degree partly in Malaysia and partly in those countries. However, in view of the negative impact of such an outflow of Malaysian students has on the country's Balance of Payments, the government is now trying to reduce the number of Malaysians studying overseas, especially those sponsored by government agencies.

In terms of their operating budget, the universities receive block grant for the their recurrent expenditure which are negotiated annually. The total budget for all the 12 public universities for the year 1997 is RM 1,316.0. Emoluments (salaries and allowances) is a single major item constituting up to 60 per cent of the operating expenditure of universities. On the average, up to 80 per cent of the university's operating budget

comprises of grants from the government. Tuition fees accounts for approximately 6 per cent, while the remaining takes the form of other income.

The development budget, on the other hand, is allocated on a five year basis to coincide with the nation's five year rolling development plans. It is based on the institution's proposed investments for development purposes (i.e. new buildings and expansion of existing ones, procurement of new equipment as well as for upgrading and replacement etc.). While the total development allocation is approved at the beginning of each five-year plan, funds are released annually based on the institution's ability to disburse the funds allocated. The development allocation for universities during the various five-year development plans (Table 2) illustrates that development allocations have increased significantly over the years.

As research-based institutions, the universities are also in principle allocated funds for R and D purposes; although each of the universities has to bid for them under a mechanism called Intensification of Research in Priority Areas (IRPA). Under the supervision of the Ministry of Science, Technology and the Environment, the government initiated this R and D funding mechanism since the Fifth Malaysia Plan (1985–90) when an allocation of RM 500 million was given. Under the Seventh Malaysia Plan, the funding has been increased to RM 1 billion. This substantial increase in R and D funding is to ensure that universities as well as public research institutes are able to respond to the changing needs of the country's industrialization programme. Equally important is the need for universities, as perceived by the government, to create centers of excellence in areas such as information technology, micro-electronics, advanced manufacturing, biotechnology and communications technology. These are priority areas earmarked to propel the expansion of high-technology industries in Malaysia.

Table 2. Development Allocations for Universities during Five-year Plans(RM Million)

Third Malaysia Plan (1976-1980)	556.42
Fourth Malaysia Plan (1981-1985)	970.93
Fifth Malaysia Plan (1986-1990)	1,441.28
Sixth Malaysia Plan (1991-1005)	1,877.00
Seventh Malaysia Plan (1995-2000)	3,577.00

3. *Enrolment and Output of Universities*

Students in general are able to pursue courses offered at public higher education institutions at either diploma, degree, or postgraduate level, in such fields as arts and humanities, professional arts, pure science, applied science, technology, and medicine. A higher percentage of students is still in the social sciences with slightly over 50 per cent; while in the science and technology streams the share is generally less than half. As indicated in Table 3, there is a marked increase in student enrolment amounting to 26 per cent in the academic session 1995/96 compared to the academic year 1992/93 academic session. The universities have complemented this growth with even marked increases in their learning and accommodation capacities. In tandem with this growth, the universities are also equipped to upgrade and train their academic staff via a special training budget. Newly recruited academic staff are required to pursue postgraduate programmes either at the Masters or Ph.D. levels in local universities or overseas.

Table 3. Student Enrolment in Public Higher Education Institutions

Institution	1992/93	1993/94	1994/95	1995/96
UM	13,600	14,991	15,526	16,421
UKM	13,701	13,199	14,110	14,953
USM	14,244	15,097	16,284	17,786
UPM	11,586	11,650	11,925	13,400
UTM	10,020	11,345	12,784	14,686
UUM	7,520	8,517	9,692	10,159
UIA	7,158	8,053	8,845	9,633
UNIMAS	-	119	465	945
UMS	-	-	-	205
ITM	31,511	28,377	36,977	42,084
KTAR	6,864	6,705	6,442	6,198
TOTAL	116,204	118,053	133,050	146,470

Source: Department of Higher Education

Table 4 indicates the output of graduates since 1992. 1995 saw an output of 30,007 students, with professional arts leading the highest number of graduates. However, as indicated earlier, the country has still a big gap in the field of science and technology, medicine, and information technology.

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Table 4. Student Output in Public Higher Education Institutions

Institution	1992	1993	1994	1995
UM	3,120	2,290	3,179	3,397
UKM	3,685	3,988	3,317	3,370
USM	2,621	2M774	2,869	2,893
UPM	1,813	2,354	2,627	2,455
UTM	2,184	2,375	2,201	2,548
UUM	652	624	1,197	1,484
UIA	1,152	1,139	1,466	1,662
UNIMAS	-	-	-	3
ITM	7,161	7,283	7,784	10,745
KTAR	1,832	2,144	2,194	2,050
TOTAL	24,220	24,971	26,834	30,607

Source: Department of Higher Education

Currently the role of public-owned universities is certainly critical in supplying the country's manpower needs; and they are as follows:

- Universiti Malaya (1962)
- MARA Institute of Technology (1967)
- Tunku Abdul Rahman College (1969)
- Universiti Sains Malaysia (1969)
- Universiti Kebangsaan Malaysia (1970)
- Universiti Putra Malaysia (formerly University Pertanian Malaysia) (1971)
- Universiti Teknologi Malaysia (1972)
- International Islamic University (1983)
- Universiti Utara Malaysia (1984)
- Universiti Malaysia Sarawak (1992)
- Universiti Malaysia Sabah (1994)

and the latest to join the list of universities is Universiti Pendidikan, Sultan Idris (1997). This institution, formerly the oldest Malay Teachers College, was upgraded to the level of a university.

However, as of 1996, the Private Higher Education Institutions Act was formulated allowing for the first time the establishment of private universities in Malaysia, although the role of the private sector in terms of higher education has started since the mid-1980s with the establishment of private colleges which principally run twinning programmes with overseas universities offering a number of degree programmes. The complementary role of

the private universities/colleges is appropriately emphasized by the Seventh Malaysia Plan which stipulates that private higher education institutions should aim at supplementing "government's efforts in expanding tertiary education opportunities, while at the same time helping to reduce the growing public expenditure on education"

As of this year, three private universities have started new undergraduate programmes and they are Universiti Telekom, Universiti Tenaga Nasional and Universiti Teknologi PETRONAS and these are respectively owned by public corporate entities Telekom Malaysia, Tenaga Nasional (power generation) and Petronas or the national petroleum company. It is the government's hope that these private universities will complement the public-owned universities in meeting the manpower needs of the country, particularly in S and T areas. In addition to these three private universities, the Ministry of Education has offered letters of invitation to two entities which are proposing to establish their own universities, namely, Malaysian University of Science and Technology (MUST) and the International and Commonwealth University.

■ Recent Changes in Higher Education Strategies

Given the current global changes that seem to affect all the countries of this region including Malaysia, there is indeed a profound awareness among policy makers and the academia of the need to reform higher education so that the universities can effectively respond to these changes. In a rapidly changing economic scenario, the universities too have to be more proactive and ensure that their academics keep abreast with the demands of the market place. For instance, they must tailor their academic programmes or degree courses to the needs of industry. Their research activities, which are indeed important in achieving academic excellence, must also be geared to industry needs. Of course there are other factors which prompt the need for university reform, including among other things, the need to ensure that university programmes and courses are relevant to the rapidly changing needs of the country; the need for universities to be run efficiently; the need for universities to link their research activities to the needs of industry; as well as the need to ensure universities obtain and, more importantly, retain the best brains.

1. *Corporatization of Public Universities*

Given the above scenario, Malaysia has during the last two years seen the beginning of a number of reforms which will lead towards a more responsive tertiary education system. The "coporatization policy" which aims at making the public-owned universities more autonomous and effectively governed has already started with the tabling of a number of amendments to the Universities and University Colleges Act (1971) last year. With these amendments, universities will have a new mode of governance allowing them to minimize

bureaucratic constraints that were in place because of government procedures and rules governing their administrative structures and salary schemes.

At the same time, their governing mechanism will be made more effective with the reduction in the number of members in their governing boards and Senate. Although at this stage, Universiti Malaya, being the longest established university, will be the first to be corporatized by 1 January 1998, all other public-owned universities will be corporatized in due course.

During the corporatization process, the government hopes to see the inculcation of a new culture of excellence within all the universities; and this will be the acid test for university management to bring out the best from both the academic and supporting staff of the university. At the same time, this must also be reflected in the quality of their graduates. It is indeed important that focus be given to this since, as in many developing countries, the Malaysian public seems to have higher expectations with regard to foreign degrees. Thus the need to constantly review the standards of undergraduate and postgraduate programmes, teaching methods, R and D activities and publication works of the academic staff.

An important component of the "corporatization exercise" is the opportunity for universities to establish companies that are related to their "core business" of higher education. This means that universities can exploit their research niches which have relevance to industry and the potential for commercialization of such research can be further enhanced.

Given this opportunity, it is not impossible for universities to spawn new inventions or innovations or even technology-driven ventures that are so common in the more industrialized countries. Like their counterparts in those countries, local universities are encouraged to be more proactive in promoting university-industry linkages and establishing science/technology parks or innovation centers. It is through such mechanisms that industry will have access to expertise and highly qualified academics from the universities.

2. *National Higher Education Council*

In tandem with the "corporatization exercise", an equally important measure initiated by the Malaysian Government is the establishment of the National Higher Education Council in 1996 via the promulgation of an Act of Parliament of the same name. The Council is responsible for the planning and formulation of policies as well as strategies on higher education in Malaysia. Such policies include: national higher education plan, finance, academic staff emoluments, student intake, fees, university programmes and courses offered.

Its jurisdiction encompasses both the public and private sector education aimed at ensuring effective co-ordination of action and purpose between the two sectors. Thus it enables the council to streamline its strategies and policies towards greater development of higher education in the country. It is served by 14 Council members headed by the Minister of Education. It is managed by a Secretariat, located at the Department of Higher Education, Ministry of Education. The council members are selected from among senior government officials, vice-chancellors, heads of private colleges, and business personalities.

The Department of Higher Education was reorganized since October 1995 and given a more focused role with regard to higher education. Organizationally, the department is under the direct supervision of the Ministry's Secretary-General and the Minister of Education and is supported by five important divisions namely: policy management and governance, development and finance, management of student intake, overseas students welfare, as well as administration and finance. Its functions include: to co-ordinate the development programmes of universities and other public higher education institutions, control of financial grants, approving new academic programmes and the setting up of new faculties, students admission, and students welfare abroad.

3. *Increased Enrolment*

Despite the increased enrolment of undergraduate students as mentioned above, there is also a tremendous amount of demand for university places amongst school leavers; and this has to be met judiciously not only in terms of the increasing demand for highly-qualified manpower but also with respect to buttressing social ills emanating from a large pool of the population not given the opportunity to enter tertiary education. Thus, with respect to public-owned universities, the government has set a target of increasing the enrolment of undergraduate students to 20,000 by the year 2000 for the more established universities, while the new ones will have to increase their intake according to their physical and academic staff capacity. This strategy is to be complemented by upgrading into universities some of the existing polytechnics or teachers' training colleges.

These measures are also part of Malaysia's strategy to "democratize" tertiary education so that a larger number of students and school leavers are given the opportunity to gain admission into local universities. At the same time most of the public-owned universities are either consolidating or introducing distance learning education to achieve similar objectives. This is also an important component of "continuing education" as envisioned by the Ministry of Education. While it is already accepted that universities are to increase their enrolment of undergraduate students, there must also be a conscious effort to ensure that academic standards are maintained, if not enhanced. For example, student-lecturer ratios in each Faculty or programme must be kept to a level that is conducive to effective learning and teaching.

With the expected increase in student enrolment and the increasing costs of undergraduate education, the Ministry of Education has recently introduced a *National Higher Education Fund*. Apart from providing university students with alternative financial support, the Fund will have another important mechanism to complement the loan scheme, i.e. a savings scheme to encourage savings amongst school children. The loan scheme will ensure that students with financial difficulties are able to stay and complete their studies given its availability. The student loan scheme is made available to students pursuing degree courses in either public or private institutions locally. The introduction of this Education Fund must also be seen in the light of the increasing costs that have to be borne by the government and the need for students/parents to share part of the cost.

4. *Enrolment Target of 60 per cent in Science and Technology*

In view of the increasing need for highly qualified manpower in the science and technology disciplines, the Ministry of Education has set a target of 60 per cent of undergraduate enrolment in these areas. The strategy is to ensure that the country's industrialization thrust will not be constrained by the lack of highly qualified people. In this context, students at the school level are encouraged to take up science subjects while the Ministry of Education has been taking concrete steps to ensure the availability of qualified science and mathematics teachers.

The increase in undergraduate enrolment will also be complemented by a similar increase in postgraduate enrolment. According to the Seventh Malaysia Plan, the government plans to increase the capacity for postgraduate courses from 11.5 per cent of total enrolment at the degree level in 1995 to at least 14 per cent in the year 2000. An important aspect of this planned increase is related to the country's increasing need for highly qualified R and D personnel.

5. *Private Universities*

The Department of Higher Education annually receives substantial applications from qualified students seeking admission to local public owned universities. Of this number, less than half will be successful and the rest may have to abandon the idea of further studies; although for those who are from higher income families, they might either opt for universities abroad or join private colleges which offer twinning programmes. Recently the government has enacted the Private Higher Education Institutions Act 1996 to provide a comprehensive law regarding the setting up, management, and development of private universities. The supervision of such institutions come under the purview of the Department of Private Education, Ministry of Education. As indicated earlier, there are already several large Malaysian corporations in the business of telecommunications, petroleum, and power generation taking up the challenge to establish their own universities.

The issue of quality education is always uppermost in the minds of both policy-makers and the public; and this is particularly relevant in the context of the increasing role of private entities involved in higher education. For this purpose, the government has established a specialized body under the National Accreditation Board Act 1996. This Board is given the responsibility to formulate policies on the standards and quality of courses of study, accreditation of certificates, diplomas and degrees of all private institutions of higher education. In addition, the Board also monitors, reviews and oversees these standards and quality and make appropriate recommendations to the Minister of Education. The Board is served by a Chairman and 9 members, comprising mostly of academicians selected from various public universities so as to provide a balanced academic representation of various disciplines and programmes. This would allow for a more credible evaluation of degrees and certificates for use in private higher education institutions.

■ Concluding Remarks

It is indeed critical that we relate the strategies discussed above with the government's principal objective of ensuring that local universities or similar institutions of higher education are capable of meeting the manpower requirements of Malaysia. We must also recognize that the country's human resource development, an important component of every Five-Year Plan in Malaysia, will play a key role in achieving the country's desire to become an industrial nation by the year 2020.

The pool of highly qualified, innovative and adaptive manpower must be constantly replenished to meet the ever changing needs of all sectors of the economy. This has become more pertinent in the context of the government's desire to establish a Multimedia Super Corridor (MSC) which must be supported by an abundant supply of knowledge-workers. This is indeed an enormous challenge in terms of policy-making and implementation as Malaysia, like any other country in the region, faces the 21st Century.

It must also be emphasized that the process of reforming higher education could be viewed in terms of making Malaysia as a Centre of educational excellence in this region. While this could be achieved within a medium or long-term framework, it calls for the introduction of new and innovative measures that will guarantee a new culture of excellence to be established in all the public-owned universities, the newly created private universities as well as the numerous private colleges catering for higher education. All these institutions and especially those entrusted with leadership roles will undoubtedly have to respond to the numerous challenges that will come in their way as we march into the next millennium.

In charting the future course of Malaysia's higher education, it is also crucial that we learn from the experiences of other countries, including those in the Asia-Pacific region, as they can throw much light into our planning dimension on human resource development. It is equally important, and of course beneficial, that Malaysian universities consolidate their networking activities amongst themselves as well as with universities in this part of the world.

Changing Policies and Strategies in Higher Education in South Asia

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■ Introduction

Since the beginning of the 1950s, i.e., after attaining independence the several countries of the South Asian region, like many other developing and developed countries in the world, have adopted a welfare state approach in development planning in general, including planning higher education in particular. Governments have played the most important role in promoting higher education. As a result, there has been rapid growth in the development of higher education in all the countries of the region. While the quantitative growth has been impressive, there are several problems relating to quality, relevance, internal and external efficiency of higher education systems. Even the quantitative expansion is found not adequate to make higher education accessible to all.

The growing economic difficulties and the accompanying economic reform policies that have been the dominant feature of the countries of the region since the early 1980s have forced the governments in the region to think of alternative policies of planning and development of higher education systems. Some of these recent policies, which are also described as neo-liberal policies, have both strengths and weaknesses producing several desirable and undesirable effects on the development of education, on the development of economic systems and on the development of society as a whole. A close examination of these policies and emerging trends would help in drawing important lessons for the development of higher education in transition economies.

With this intention, this paper presents a brief description of the characteristic features of the higher education systems in the countries of the South Asian region as they evolved over the years, particularly since the middle of the present century, and discusses the recent policies and emerging trends with respect to a few important dimensions of higher education. It does not present an exhaustive account of all the issues related to higher education. On the other hand, a few important aspects are identified and briefly discussed.

■ Characteristics of the Region

The south Asian region, also known as the Indian subcontinent, consisting of about 1,000 million population, i.e., about one-fourth of the world population, is rather the poorest region economically in the world. The region comprises of nine small and big countries, viz., Afghanistan, Bangladesh, Bhutan, Myanmar (Burma), India, Nepal, Pakistan, Sri Lanka and Maldives. Not only these countries are contiguous to each other, but also constitute a homogenous group in terms of socio-political, historical and economic and educational background, essentially historically being heirs to a heritage of common culture and civilization steeped in history; and the tradition of this common heritage are still found in these countries. Yet these countries are diverse in several respects. Maldives is the smallest country in the region with 0.24 million people, but highest per capita income (US$900), as per the latest available statistics[1] In contrast, India is the largest country in the region with 950 million population, but with a GNP per capita of only US$310. The countries in the region vary in population size and in per capita income, but all belong to the third world, or the group of developing countries, some of them are, in fact, least developed.

There is very high concentration of the poor in the region. The whole region can be called an agrarian economy. Religious and cultural factors dominate the social and economic living. Most countries of the region underwent long periods of colonial rule and they became independent only at the middle of the century, Bangladesh becoming independent from Pakistan in 1971. After attaining independence, all the countries in the region adopted development planning as a strategy of development. India has adopted mixed economic planning system, combining both socialistic and market-based modes of development. Modern welfare state approach can also be regarded as an essential ingredient of development approach of the countries, Sri Lanka raking high in terms of its social welfare policies. The efforts of the countries to improve economic growth seriously

1 Most of the statistics in the paper are drawn from World Development Reports (World Bank), *Social Indicators of Development (World Bank), Statistical Yearbook (UNESCO), World Education Reports (UNESCO), and Human Development Reports (UNDP)*. They are supplemented by national sources and research studies.

suffered due to high growth of population, particularly in countries like Pakistan, Bangladesh, Nepal and India. In Pakistan, Bangladesh and Nepal the rate of growth of population has been above 2.5 per cent per annum. Sri Lanka could reduce the rate of growth of population considerably to under 1.5 per cent.

In terms of human development index, the several countries in the region, except Sri Lanka figure relatively very badly among the countries of the world. Except Sri Lanka and Maldives, the index of all the other countries of the region is less than the average of all the developing countries. All these socioeconomic factors have significant implication for education in the region.

■ Changing Economic Policies

Though the several countries of the region are at different levels of economic development, all are economically poor, and are classified as developing countries. In the recent period deficits in public budgets became large and debt burden (including external debt burden) has increased. Defense activities eat up substantial amount of national budgets. As a result, many countries of the region have had to resort to external borrowing, particularly from the World Bank and International Monetary Fund. In fact, these countries, specifically India, Pakistan, Bangladesh, Nepal and Sri Lanka have adopted the familiar adjustment policies, associated with the World Bank and IMF.

The adjustment policies include major policy reforms and consist of two distinct strands of a single package: (a) short term stabilization policies attributable to the International Monetary Fund and (b) long term structural adjustment policies associated with the World Bank. Both signal a new wave of policy-oriented loans, and constitute an important type of non-project lending of the Brettonwoods institutions. Stabilization policies, essentially viewed as a short-term demand oriented device to reduce macro economic imbalances, rely on demand management and include sustainable reductions in budgetary (fiscal and revenue) deficits, and current account of the balance of payments, and reduction in inflationary gaps through devaluation of local currency, reduction in government expenditure, reduction in public subsidies, control of bank credits, tax reforms, controls on wage increases, dismantling of price controls and allowing the market to determine prices, etc. The most direct consequence of all this would be cuts in government spending leading to drastic reduction in public subsidies across the board, though the reduction need not necessarily be, and most often not, uniform across all the sectors. Actually the cutbacks in government expenditures are expected to be focused on unproductive or less productive sectors, and not necessarily on human capital development sectors like education and health.

In contrast to the short term stabilization policies, the structural adjustment policies, on the other hand, aim at long term structural reform, including improvement in productivity of

resources, improvement in allocation of resources, increase in economic efficiency and flexibility of the economy, increase in competition, and thereby expansion of the economy. More importantly, they also imply reduced role of the state and increased role of the market mechanism or privatization and dismantling of state apparatus in the name of de-bureaucratization. It is generally argued that but for the adjustment policies, distortions in allocations would take place and inefficiency at macro level might increase.

The objectives of the overall adjustment policies have been, thus to (a) stabilize the economy, (b) to improve allocation of resources, and thereby raise the level of output and income and (c) to achieve higher levels of savings and a more efficient use of investment resources in order to raise the rate of economic growth. These goals are to be achieved through (a) privatization and (b) globalization.

Privatization implied reduced role of the state, and placing the market at the centre of the society. Privatization is a powerful phenomenon that puts markets and market concerns ahead of the state and policies and concerns of the state. And globalization is found to be a very powerful force, which places the world economy ahead of national economy and accordingly domestic policies have to be subdued to international policies and national economies are to be thrown into an international blender. Thus the role of the state is reduced particularly in the domestic economy and is found important only in promoting private sector and globalization.

These policies have significant implications for the education sector as well, including higher education.

First, it must be noted that the very success of economic reform programmes critically depend upon higher education. As with globalization and international competition, the need for more educated labor force would be strongly felt. With illiterates and ill-educated work force, the reform programmes cannot even take-off properly. In this sense, higher education becomes "even more important in the new context of a global economy".

Second, reduction in public subsidies to higher education will necessitate a search for non-conventional approaches towards financing higher education and experimentation with the same.

Third, policies of privatization may also not leave higher education sector. In other words, forces towards privatization of higher education become strong.

Fourth, to support these policies, arguments are also made questioning the 'quasi-public good' and 'merit good' nature of higher education. Higher education is being treated as a 'nonmerit good' and as a 'private good'

All these trends will have long term and short term effects on the growth and development of higher education system.

In this overall background, an examination of the emerging policies and trends in higher education in the countries of the region is attempted in the remainder of the paper.

■ Education Scene in South Asia

First, a quick look at broad education indicators of the countries of the region. Except in Sri Lanka, Maldives and Myanmar the rates of literacy are very, if not deplorably, low in most countries of the sub-continent. The highest rate is 51 per cent in India. It is 27 per cent in Nepal and 37 per cent in Pakistan and Bangladesh. The region accounts for the world's largest number of illiterates on the planet. Again except in Sri Lanka, universalization of primary education seems to be a very distant goal in these countries. Hardly half the population of the relevant age-group; in Pakistan are enrolled in primary schools. The corresponding figure (gross enrollment ratio) is high in India and Bangladesh. But the net enrollment ratio in India is believed to be around 60-70 per cent. Educational levels of the population, as measured in terms of mean years of schooling are relatively very low in all the countries of the region, in comparison with East Asian countries and other developed regions of the world. The only exception again is Sri Lanka, where it is 6.9 in 1990. It was 0.2 in Bhutan and 1.9 in Pakistan. In all the other countries, it is above two. There is no progress in the corresponding figure between 1980 and 1990 in Bhutan, Bangladesh and Myanmar and in other countries the increase is very modest.

Both social and private rates of return to education are quite high in those countries of the region, on which such estimates are available. Estimates, though dated, are available on India, Nepal, Pakistan and Sri Lanka. The social rate of return to secondary and higher education in Pakistan are a little less than 10 per cent. All other estimates are above 10 per cent (Psacharopoulos, 1994). The high private rates of return to education should in fact cause huge demand for education at all levels.

■ Higher Education

While South Asian counties have had a rich and long historical tradition of higher education, this phenomenon was confined to the period ranging ancient period to the pre-colonial period. At the end of the colonial rule, the higher education systems in the South Asian countries were in a deplorable state. Significant growth has taken place in higher education only during the post-independence period.

1. *Salient Features of Higher Education in South Asia*

Following are some of the important salient features of higher education systems in the South Asian region:

a) South Asian countries are highly diverse with respect to the development of higher education. The higher education system in India is one of the largest in the world, with more than 250 universities, and 8,000 colleges, while it is practically non-existent in the tiny kingdom of Bhutan. In Nepal there are only two universities with 137 'campuses'. There are 21 universities and 600 colleges in Pakistan, and a dozen universities in Sri Lanka, there are seven universities in Bangladesh.

b) The student numbers are also large and diverse in the several countries of the region. In India five million students are enrolled in higher education institutions. The next highest figure is less than half a million in Bangladesh. There are only 60 thousand in Sri Lanka.

c) Higher education has expanded fast during the post-independence period, i.e., since the middle of the century. This is true in terms of number of institutions -universities, colleges and other institutions of higher education, and also in terms of number of students.

d) But the growth is not sufficient. An important stock variable, viz., population with higher level of (postsecondary) education constitutes a small proportion of the educated people and a smaller proportion of the total population in the countries of the region. According to the estimates available for 1981, the ratio ranges between 1.1 per cent in Nepal, Sri Lanka and Myanmar and 2.5 per cent in India.

e) Despite impressive growth in enrollments, the age-specific enrollment ratios (number of students in higher education as a proportion of the population of the relevant age-group) are very small, and compare very unfavorably with many developed and even developing countries of the world. They range between 2.6 per cent in Pakistan and six per cent in India in 1990.

f) Similarly, despite high growth in enrollments, gender disparities in favor of males and against females, are sizable, except in Sri Lanka, where women students seem to outnumber (or at least equal) the number of male students. In the other countries of the region, the enrollments are in the ratio of 2:1 to 4:1. In general, males dominate the education scene, including specifically higher education scene, where it is higher, in the South Asian countries.

) The quality of higher education varies significantly between several countries, and also between several institutions within each country of the region. While there are a few institutions imparting higher education of excellent quality (e.g., Indian Institutes of Technology and Indian Institutes of Management in India), a vast major part of the higher education sector suffers from poor quality. This is also reflected in terms of ow rates of graduation.

h) The growth in quantitative terms as well as in quality are not adequate. Still there exists massive excess demand for higher education. Sri Lanka has a highly restrictive policy with respect to admissions into higher education institutions. Students wait for 2-3 years after completing school level before getting admission in higher education. Student places are not sufficient to meet the demand in India. Both excess demand and differentiated demand (for better quality of higher education) cause out-migration of students to developed countries for higher education. This phenomenon is common in all the countries of the region. As few students return to the countries after studies abroad, the problem of brain drain is also felt to be a serious one in all the countries of the South Asian region.

i) A substantial proportion of the enrollments in higher education enrollments are of the lowest higher education level. According to the ISCED classification, students in higher education could be classified into three levels, viz., Level V, Level VI, and Level VII. [The same could also be understood in terms of levels of higher education: preDegree, First (Bachelor's) Degree, Second (Master's) Degree and Research Degrees.] In Nepal enrollments in Level V constitute the largest segment; in Sri Lanka also the corresponding proportion is high. It is only in India this proportion is rather small. In general, only a tiny segment of students in higher education are enrolled in postgraduate courses and fewer in research levels (M.Phil and Ph.D.).

j) Higher education is also dominated by areas such as Humanities and Social Sciences. Enrollments in Physical and Natural Sciences and more specifically in medical and engineering sciences are relatively very small. 50-75 per cent of the enrollments are accounted by Humanities, Law and Social Sciences in the countries of the region.

k) With respect to management and finances, there is a high degree of control of system of higher education by the government. Government is also the most important financier of higher education, financing a large, if not total, part of the budget of higher education. Above 80 percent of the budget for higher education in India, and as high as 95 per cent in Sri Lanka is met by state grants (Tilak, 1995, 1996).

l) The contribution of fees to higher education has not been found significant in general. According to some estimates available, fees as a proportion of total costs of public higher education are in the range of 0-3 per cent in Sri Lanka, four per cent in Pakistan, 10 per cent in Nepal and 15 per cent in India (Ziderman and Albrecht, 1995; Tilak, 1995).

m) Another interesting aspect with respect to financing of higher education is, unlike in the western countries such as USA, there are only two sources of funds for higher education in the South Asian counties: the government and the students. Non-governmental and non-student sources of funds are negligible.

n) A sizable part of higher education systems is managed by private sector. For example, as high as 58 per cent of the enrollments in higher education in Bangladesh and in India are in private colleges. But these private institutions are mostly state financed (Tilak, 1991).

While these features describe some of the important aspects of the higher education system in the region as evolved over the years, significant changes are taking place in public policies relating to higher education. These changes are briefly described in the following section.

2. *Recent Trends in Higher Education*

The recent economic reform policies, as mentioned earlier, have tremendous implications for policies on higher education. What are the emerging trends in higher education? Some of the important trends can be noted as follows:

a) The first and foremost important development has been growth in concern for issues relating to higher education and wide public debates on policy issues on education in general and higher education in particular. Countries are trying to reformulate their educational policies, plans and strategies of development.

b) Recent special emphasis on school education, particularly Education For All (EFA), which is due to genuine national and international pressures, has led to rather neglect of higher education. Even statistical information on higher education that used to be made available earlier, is not being collected and processed promptly.

c) Economic difficulties of many countries resulted in adoption of World Bank/IMF policies of stabilization and structural adjustment. As a part of these policies, public budgets for higher education began shrinking rapidly and significantly - in relative proportions as well as in absolute amounts, more clearly in real prices. The share of higher education in total recurrent expenditure on education declined in India, Bangladesh and Nepal between 1985 and 1992, while in Sri Lanka also it declined, but between 1992 and 1994. In India the expenditure on higher education in real prices declined steeply between 1989-90 and 1994-95 (Tilak, 1996).

d) With decline in public budgets, rates of quantitative expansion in terms of number of universities and colleges and number of students, have declined. For example, the rate of growth in enrollments in higher education in India declined to less than five per cent per annum, compared to above 10 per cent in the 1950s and 1960s.

e) However, more than decline in growth in quantitative dimensions of higher education, a steep decline takes place in the quality of higher education, as scanty resources are thinly spread over a larger number of institutions. As a result, many universities and colleges suffer from severe degree of inadequate funds for libraries, laboratories, and

other inputs which have strong bearing on quality of higher education. Public budgets seem to be focusing on salaries of the staff and/or maintenance of the systems.

f) Further, equity dimensions in higher education are seriously affected, as public budgets for scholarships, subsidies for hostels, and for other living expenses, and other programmes that work as incentives for economically and socially weaker sections of the society to go for higher education are reduced. As a result, the composition of student numbers are changing in favor of the relatively well-to-do.

g) There is a remarkable growth in distance education and open learning systems in higher education in the recent past. For example, India has now five open universities, including one national university, compared to one university in the late 1980s. Most universities give due importance to schools/colleges of correspondence courses. They are viewed as important resource generating avenues. The annual rates of growth in enrollments in distance education in the recent years are highly impressive: 9 per cent in Bangladesh, 13 per cent in Sri Lanka, 15 per cent in India and 27 per cent in Pakistan.

h) Student fees in higher education are introduced in countries where higher education was provided free, and in those countries where fees was levied earlier, fee rates are increased dramatically. Discussion on introduction of fees in Sri Lanka, where higher education used to be free, are on a rise. Tuition fees are increased in many universities and colleges in India; but more than tuition fees, fees for other services (such as registration, application, examination, etc.,) are increased disproportionate to the costs. Full cost recovery is attempted in case of other services like hostels.

i) Attempts are being made to introduce differential fees in higher education in the countries of the region, particularly in India and Sri Lanka – one for native students and another level for students from foreign countries (payable in US$ or in hard currencies).

j) Many universities are also trying to forge effective relations with industry so as to generate additional resources. It is also hoped that this would help in improving the quality of relevance of higher education. For example, in India the Government of India has recently offered several tax incentives to the private and corporate donors to higher education institutions and also incentives to universities in utilizing those funds, besides offering matching grants.

k) Many universities today pay serious attention to 'self financing courses' - where student fees equal, if not exceed, the costs of provision of higher education. There has been added stress on generation of internal resources by universities and institutions of higher education. It is also felt that trading off of educational considerations for financial gains is taking place, leading to distortion in priorities of institutions. Heads

of institutions like Vice-Chancellors and Principals of colleges are required to serve more as financial managers than as academic heads.

l) The growth of self financing institutions has also been a recent phenomenon. Privatization of higher education is being encouraged. Commercialization or marketization of higher education, which were not well respected earlier, is an emerging trend in higher education in the region.

m) There has been an increase in 'fake' universities and colleges and accordingly exploitation of the 'gullible' students and parents is on increase. With limited places in public universities and colleges, students find no alternative but to opt for such universities.

n) Countries such as India, Pakistan and Sri Lanka in the region have had experience with student loan programmes. Of late they are being revitalized, for example, with a view to make them an effective solution to the problem of financing of higher education.

■ Concluding Observations

The UNESCO (1995) Policy Paper pointed out three important trends in higher education throughout the world: (a) enormous quantitative expansion, which has nonetheless not led to increased equality of access, (b) poor quality and inadequate diversification of institutions, and (c) thirdly, expansion in an increasingly constrained financial environment, where expenditure per student has not kept pace with the growing student numbers. The growth of higher education in the south Asian countries is one particular example of these world-wide trends.

The countries in the South Asian countries are highly diverse with respect to the level of development of higher education. But there are certain common features, most important them being that they all are at crossroads. Quantitative expansion has taken place, but gender inequalities persist; quality of education has deteriorated; and public budgets for higher education are squeezed. Changes economic conditions necessitated adoption of adjustment policies which have serious implications for the development of higher education. Public budgets began shrinking. Yet the social demand for higher education is on rise, as increasingly people realize that higher education is the only instrument of socioeconomic mobility. This is also true with respect to nations. Developing countries in the South Asian region can not reap the benefits of economic reform policies by concentrating on 'Education for All' programmes; it is equally necessary that higher education is given due importance, as without higher educated manpower, globalization and internationalization would not benefit the nations.

It is important that policies are formulated which promote the development of higher education rather than retard the same. State should make a firm commitment to financing of higher education adequately. At the same time, efforts should be made to generate required resources from various non-governmental sources, without seriously affecting equity in higher education. One of the important avenues is university-industry collaboration. Links with industries might generate sizable resources for higher education, besides helping improving the quality and relevance of higher education. Other measures including steep increases in fees, and introduction of self financing courses etc., may produce positive as well as adverse effects. Governments have to see that short term financial conditions do not determine long term policies that may have adverse effects on the development of higher education.

5

The Government's Policy and A College's Income Generation

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Since the 50s of this century, with the high-speed development of science and technology and the continuous progress of the society, all the countries the world over pay great attention to education, resulting in the fast development of higher education. However, in nearly all the countries, especially in those where the economy is under transference, the contradiction between the development and shortage of finance of education is getting acuter and it has become a key problem troubling the development of higher education, attracting the attention of the government, the society and the institution. To share our ideas with our colleagues, the Chinese government s related policy and how a college in China makes extra money to keep the school going are presented in this paper.

■ The Open Policy in China Provides Conditions for Widening the Financial Channel in All the Colleges

The reform started from the end of the 70s and the economic transference from the 90s in China make a strong impact onto the higher education. They directly enhance the reformation of both the system and the technique of the education, leading to the fundamental change of the concept and idea, forcing the structure and model to be significantly adjusted and raising many brand new questions to the college. Objectively, the college has to find a completely different existing way and development model to serve the economy and the society for its own existence and development.

During the process of opening the country and transferring the economy, the Chinese government has made a series of important policies and taken a lot of practical means, not only enhancing the development of the higher education, pushing the reform of system and teaching technique, but also changing the investment structure, widening the financial channel and to a great extent solving the problem of monetary shortage. For instance, the state has made the principle that education serve the socialist construction and the socialist construction depend on education; to mobilize the activities of the central departments and local governments to support education, the state has implemented the '211' programme, the state has been adjusting the related policies to give more authority to the school to run its own business and to make traversal combinations with enterprises and other social institutions; to make a full swing of its advantage, the school is free to make all kinds of school-run enterprises and get the pay from its social services and; to make up the shortage of teaching cost, the students are free to choose the subjects they are to take while they have to pay for their education etc. In the financial management, the state has changed the policy of 'budget and allocate, reimburse the spent and the left to be handed up', a policy in work in the beginning of the economic system reform, to 'Self-budget and keep the left for self expense'. After hard work for over 10 years, fair changes have taken place in the financial income of the college. Before the reform, nearly all the colleges the country over depended on the government s financial allocation. In 1991, the national budget for higher education was 7,048 billion Yuan renminbi and all the income from all the foundations was 1,218 billion, taking up only 17.2 per cent of the budget[1] while in 1996, the budget was 19,815 billion and the income from the foundations was 9.4 billion, taking up 47.6 per cent of the budget[2]. Take my school. My school was founded in 1912 and it is one of the national major universities with fairly good teaching conditions, the potential of which was not fully developed before the planned economy period. In the beginning of the reform, supported by Shaanxi People's Government, my school took the lead to break down the management system of divided blocks and signed agreements with The National Budget Committee, The National Tourism Bureau, China General Petroleum Engineering Company, China General Petroleum Company, China People's Construction Bank and other decades of institutions in Xinjiang, Ninxia and other provinces and areas for combined education. From the above programmes, my school got over 30 million Yuan, with which we have built a science building of 13 stories, a group of classroom and apartment buildings and an administration building and reformed some teaching facilities, having primarily improved our teaching conditions. In 1996, my school succeeded in the application for the donation from Mr. Shao Yifu, a famous patriot in Hong Kong, and the related governmental fund and built a library of over 15 thousand m^2. In 1997, my school

1 Based on 1991, *China Education Fund Statistics Annals* (China Statistica Press, 1992)

2 Based on 1996, *China Education Fund Statistics Annals* (China Statistica Press, 1997)

got a fund of $2.6 million from the World Bank and another of 7.2 million Yuan renminbi from Shaanxi Government. Since 1993, my school has been active in applying for the membership of the national '211' programme and got supports from both the National Education Committee and the Shaanxi People s Government. Now the school has got a financial allocation of 72 million Yuan and bought 236 mu of land and a group of important facilities and laboratories are under construction. In the recent years, my school has also got tens of million Yuan from the school-run enterprises, sci-tech services and personnel training. Through diligent work in various ways, the financial channel has been widened and the original serious problem of finance partially solved. In actuality, there are many other colleges in the country who have done much better than my school.

The above tells us that the related policies of Chinese Government, especially the national higher education administration, to solve the financial problem are correct, the means effective and the result outstanding. However, due to the rapid increase of the cost for higher education in the recent years, the serious problem of financial shortage in the college is still a hard nut, asking us to work further.

■ The Higher Education in China Faces New Opportunities and Challenges

From now on to the first decade of the next century, it is the critical time for us to carry out our second strategic project and to march onto the third phase. During this period, a comparatively complete socialist market economic system will be founded and great adjustments made in the governmental investment and the related method for the education, making the higher education face new opportunities and challenges.

1. Though the strategy that flourish the state with science and education and education grow first has been carried out and the investment from the government to education will grow steadily, we are still on a long journey to solve our financial problem due to the fact that our economy is underdeveloped and the education we are making is the greatest in scale the world over.

   In 'The Outline of China Education Reform and Development' and 'Education Act', the state definitely states that the requirements and norms of the government's investment to education are: (1) By the end of this century, the government's investment will be up to 4 per cent of the total national income and in 2,010, it will be up to the average level of the averagely developed countries. (2) The budget for education of the local governments should be higher than the rate of the economic growth. (3) The average fee for each student on the campus and that provided for each student will grow gradually. (4) The teachers pay will grow gradually. (5) 20 per cent of the local government s added income is to be used in education. (6) In the Eighth Five-Year Plan Period, the investment to education is no less than 15 per cent of the national

financial expense, 20 per cent of the provincial and 35 per cent of the county. To make sure that the investment to education will grow steadily, all the local governments are required to make the policy effected. The total national investment to education in 1995 was 141,152 billion Yuan, increasing 192.72 per cent to that (48,218 billion) in 1991. The investment to higher education in 1995 was 23,816 billion Yuan, with an increase of 70.48 per cent to that (7,048 billion) in 1991[3]. However, because the increase in the national financial income lags behind that of the economic, the rate of the financial investment to education to the general national productivity decreases annually: 2.85 per cent in 1991, 2.73 per cent in 1992, 2.52 per cent in 1993, 2.62 per cent in 1994 and down to 2.45 per cent in 1995. To increase the investment to education is hard work. And as we know that the education in China is the greatest in scale the world over with over 20 million staff and faculty people and with all the students on the campus, take up a fifth of the total population. Then, the national investment to education will be fairly restrained until great changes have taken place in the rate between the national financial income and general national productivity and that between the governmental finance and the national finance.

2. The new financial system of mainly depending on the government's allocation and collecting money in various ways is primarily set up, but not complete yet. As stated above, the situation of depending on the governmental allocation only is primarily changed, but the new system is not fully formed and not surely complete. For example, (1) The main financial channel does not work properly, the rate between the allocation and the total financial expense is not stable and in some areas, it is even in the trend to decrease. An effective mechanism to encourage the enterprises, social institutions and individuals to donate for education is not formed yet, so their potential is not fully developed. (2) Though the college students pay their tuition, the paying mechanism for the education cost is not complete, nor is the related policy. The distortion of the training cost because of the financial difficulty makes it hard to set up the foundation of the paying mechanism in a scientific way. (3) The training model and quality of higher education can not meet the need of the modern construction and many questions of how to turn out proper individuals for the social economy are not answered. For instance, how to carry out quality education, how to solve the problem of more academic researchers but fewer practitioners and the reform of the major subjects should be carried out urgently.

3 1991, 'China Education Fund Statistics Materials', China Statistics Press.
1991, 'China Education Fund Statistics Annals', China Statistics Press.

3. The administration structure of the government making the macrocontrol, the social walks getting involved and the school facing the society is established, yet the policy changes from time to time and can not be put into practice. For instance, how the government will turn from direct administration to macrocontrol, how the college will face the society and run itself by the law and how both the school and the society can mutually get involved in carrying out education? Those questions are not theoretically cleared up and by nature, they are ideological ones.

4. The capabilities to serve the society and to make enough money to support itself of the school can not meet its need and they should be improved. After hard work of over 10 years, the active desire to meet the need of the society, the education quality, the economic effect and the capabilities of serving the society and helping itself grow of the school have all improved, but there is still a distance to the social development, making it difficult for the school to support itself financially. For instance, (1) the transference rate from sci-tech result to productivity is low - no more than 34.6 per cent. (2) The majority of the teaching and research people are academic ones and only a few of them have economic ideas or are sci-tech innovators. (3) The service system for daily life on the campus is not socialized, increasing the running cost, affecting the working efficiency and restraining the money-making capability of the school.

■ The Major Courses to Solve the Problem of Financial Shortage of the College

It can be seen from the above analysis that both opportunity and challenge exist for the higher education in China and financial shortage is the key factor restraining the development of the cause and the improvement of the quality. Whether or not this problem will be solved will affect not only the development of the education as a whole, but also the steps of the socialist modernization of the country. The main causes leading to the financial shortage are the old concept of education, the government's policy, the school's adaptation ability to the new situation and the calculation and compensation of the education cost. To rapidly increase the school's capability to make money to fundamentally solve the financial problem of the school, the following suggestions are put forward for discussion.

First, scientifically examine and calculate the education cost, ensure the major position of the governmental investment, gradually increase the rate of the outlay for education to the general national productivity and try to make the investment to education reach the average level of the mid-developed countries. For this purpose, the old concept on education should be changed and it should be well understood that education is not a consumption activity, but a production one, that the investment to education is not a consumption investment, but a production one to store man power. Scientifically calculating the cost of

education is the foundation to increase the government's investment and to make the related policies, so the present distortion in examining education cost should be changed and all the calculations should be made on the teaching site, which is the only proper way to make the related education laws and policies, assuring the investment to education to be at a higher rate in the general national productivity.

Second, further enlarge the college's authority to run itself and make sure that the schools is free to use its advantage and conditions to make more money to make up the financial shortage. This requires the government to gradually transform its function to provide the school with a better external environment. Under the conditions of socialist market economy, the government should, with the priority of assuring the socialist direction, show the school to follow the rule of higher education to gradually go to the market (including human power market, the technological market, the intelligence market and the products market) to find out a brand new existence way and development model. The government should focus on guidance and macrocontrol to encourage the school to compete to enhance the formation and completion of the competition mechanism. The government should have the idea that the school can go with the need of the economic transference, make money with its advantages and make some necessary financial making up when in difficulty. For this goal, the key is whether the government will transform its function and further enlarge the school's autocracy. The school's autocracy will be realized only when the government transforms its own function.

Third, further complete the money-making system and cost compensation mechanism to practically protect the legal rights of the state, the school and the student. For this purpose, the concept referring to "money-making" of a school should be redefined to give a new sense to the term. At present, the majority of the people understand the term as that the school increases income for itself through its school-run enterprises, sci-tech transference, social services and teaching other students beyond the planned. Though the above aspects are the major ways the school makes money, it is not enough to confine the idea into them. Actually, the term should be understood in a much broader sense. Namely, except the government's allocation, all the other incomes the school makes should be included. With this sense made clear, all the policies referring to the idea will be gradually completed.

All the incomes the school makes in various ways should be considered as a compensation to the education cost and the government should encourage all social walks to invest for higher education by making related policies. To the countries which are in the process of economic transference, where the economic development relatively lags behind and the government's policy is usually uncompleted, this encouragement policy is specially necessary.

Fourth, based on the new definition of the term, the government should make a series of related policies as soon as possible to ensure that the school will increase its income in a

large scale to partially solve the problem of financial shortage and to get its fundamental education cost basically provided. It is urgent to make the following policies and put them into action:

1. Implement a elastic enrolment plan. The present 'rigid' enrolment plan is not beneficial to the school to fully develop its teaching potential, not to say its variety of shortcomings, so an elastic enrolment plan should be implemented. In other words, the enrolment planning institution only macrocontrol the national enrolment, but the practical enrolment of each school not be fixed to introduce some competition mechanism and the institution only ratify the standard enrolment plan of every school. The colleges which have been considered qualified by the related governmental institution after examination be allowed to enroll more students. Then, the schools with better teaching conditions and higher quality will have more students and make more money while the other schools will have to compete. The schools which can not enroll enough students will be forced to make reforms to improve their qualities for survival, or they will be eliminated from the market.

2. Carry out the policy of "One schools, two policies". Due to the historical reasons, at present, our higher education is run by the government and the private schools are very weak. And many private schools depend on the teachers of the state-run colleges in their teaching work, leading to the "potential Loss" of teacher from the related colleges. To dig up the potential of the college and to absorb fund from the society, a policy of "One school, two policies" may be carried out in the college. For instance, the social power may be absorbed into the college by forming some boards and within the campus, some institutes or schools are run by individuals or subordinate units while they are all under the college's general administration. This can not only ensure the teaching quality, but also solve the financial problem. Also, the college should adopt different administration methods to run the research units and school-run enterprises. The enterprises may run on the share system, then a mixed property system will appear on the campus. The state has not made any policies referring to the idea of "one schools, two policies", making it an urgent problem.

3. Strengthen the support to the development and industrialization of the sci-tech results of the college. The sci-tech results of the college usually are late and high technology and their industrialization is usually characterized by their high investment, high risk, high effect and long cycle. At present, one major setback to the development and industrialization of the results of the college is the poor absorption of the industry and another is that those results are not well mid-tested and not ready for production. Those problems can be solved only with the financial support from the government. It is suggested that the policy be as follows: (1) 50 per cent of the investment from the central and local governments be used in the transference of the sci-tech results and speeding up the construction of the mid-test base. (2) Encourage the enterprise and the

college to transfer the results with the supplementary investment. The government supply the enterprise who is transferring a result with the same amount of money as that the enterprise invests and the government invest more money to the poorly developed areas. (3) Further reduce the tax. The Congress Document (89) No. 10 stipulates that the college is free from tax to do technical development, technical consultation, technical services and technical transference, but now, except for the transference, the school has to pay tax for all the other businesses, greatly troubling the second development and transference. iv, Develop the sci-tech assurance, strengthen the related legislation and protect intelligent properties.

d) Under the guidance of the government's policy, the college has got the capability to serve the society and to develop itself through further reformation, bettering the structure and strengthening the internal administration. It should set up a mechanism for self development, self encouragement and self restraint and take increasing the education quality, teaching level and financial efficiency as its goal. It should step out the ivory tower to serve the society, greatly improve the utility of the lab equipment and other teaching facilities to increase its service capability, trying to make itself the national and local development centre. Through reformation, it should make its service system and social assurance socialized and through strengthening the internal management and structural adjustment, improve its capability for self development, including that for money-making.

6

Analysis on the Source of Fund for Higher Education Institutions in the Socialist Market Economy

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ABSTRACT

Under the condition of the socialist market economy, the source of fund for the higher education institution has been transferred from the sole government allocation to diversified channels of fund. This paper, based on the current situation and the changes of fund sources which have taken place at universities and colleges administered by the State Education Commission during the period of the Seventh Five-Year Plan and the Eighth Five-Year Plan, analyzes all kinds of sources of funds for higher education institutions with focus on the incomes from university's enterprises, scientific research, donations, educational funds, and joint educational programmes. Finally, this paper elaborates the existing problems and the corresponding measures that should be taken.

Key Words: Market Economy, Higher Education Institution, Source of Fund

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Since the 14th National Congress of the Chinese Communist Party, China has undergone a deep-going innovation of establishing the socialist market economic system. During the process of transferring from the centrally planned economy to the market economy, the source of fund for the higher education institution changes dramatically, from mainly depending on the government allocation to diversified channels of funds. This situation indicates the coexistence of opportunity and challenge, as well as pressure and driving force. How to transform pressure into driving force to solve the problem of fund insufficiency has become the most concerning issue for both leaders and staff of the higher education institution.

During the period of the Seventh Five-Year Plan and the Eighth Five-Year Plan, China higher education has achieved great progress and fostered rich human resources for the economic construction. At the same time, the rational distribution of educational resources and the improvement of educational systems have also created favorable conditions for higher education. Nevertheless, since China is still a developing country, the fund insufficiency and the development of education are in noticeable contradiction. At present, staff expenses, public health services and retired staff expenses account for the most part of the government financial allocation, which results in a serious shortage of funds for education and restricts the modernization and the improvement of higher education as well. Under the guideline that "development comes next to survival" and according to the principle that "the first step is stability, the second is reform, and the third is development" for higher education, people engaged in higher education must completely change their old modes of thought that education is solely dependent on the government allocation, and try their best to find diversified channels of funds so as to enhance the development of education.

The Education Law clearly stipulates that the government financial allocation is the main body of funds for education with diversified channels of funds raising as its auxiliary. The percentage of funds for education among the all-level fiscal expenditure should increase gradually with the growth of national economy. We can classify the higher education incomes into two categories: – government allocation and self-raised funds in terms of the funds sources. The figure 1 shows that the ratio of government allocation to self-raised funds had changed significantly for the universities administered by the State Education Commission during the Eighth-Five Year Plan, compared with the Seventh-Five Year Plan.

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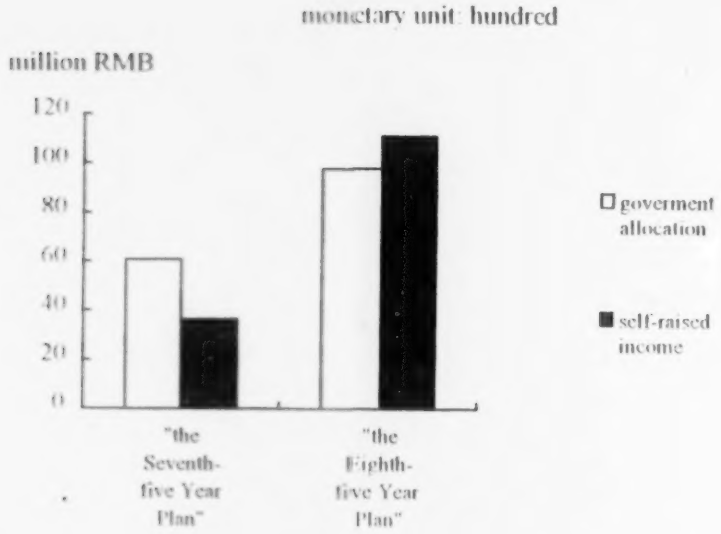

Figure 1. The Comparison of Government Allocation and Self-raised Income

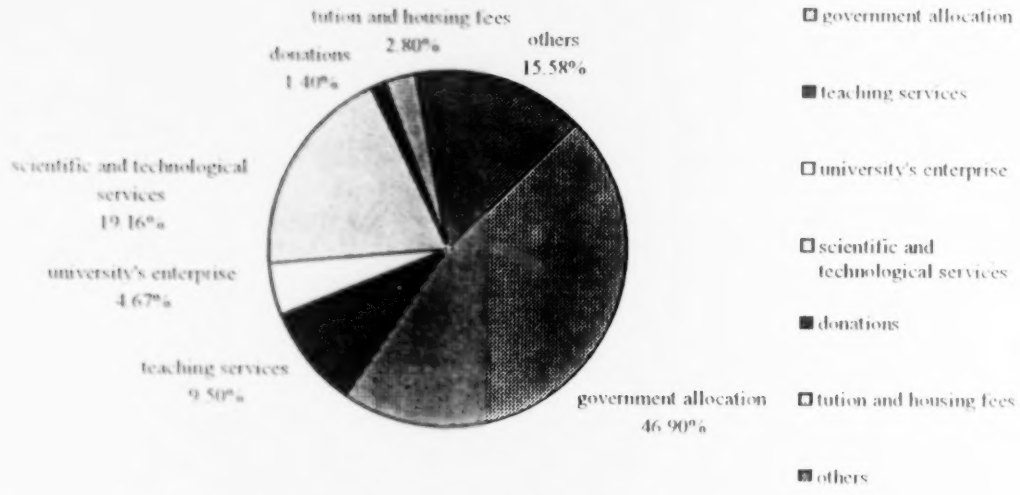

Figure 2. Total income of the higher education institution administered by the State Education Commission during the Eighth Five-Year Plan

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Figure 2 shows that the government allocation and the self-raised funds, during the Eighth-Five Year Plan, account for 46.90 per cent and 53.10 per cent of the total income of the higher education institution respectively.

This demonstrates that the higher education, with the development of socialist market economy, is in the process of transferring from the old mode under the planned economy to the new mode under the market economy, which has brought about the increase of funds raising channels and their smooth development. Generally speaking, the sources of funds can be classified into nine categories: – government financial allocation, reducing taxes on higher education institutions and their enterprises, tuition and housing fees and income from other educational services, income from university enterprises, income from donation, income from all kinds of funds, income from scientific research, loan taken from the state permitted by policy, and income from financing activities permitted by policy. Here, we believe that the income from all kinds of joint educational programmes should be added into this catalogue. Thus, these ten items have basically included all the financial sources of the higher education institution, each of them has its own characteristics.

Government allocation, the most stable financial source, is very essential to the development of higher education and to the normal operation of universities and colleges. But since the main body of government financial input, including the loan permitted by policy, is determined by the national economy and the completion of the indicator target of national economy, the whole environment of macroeconomy has to be taken into account. Tuition and housing fees are also the important financial sources(Paying for higher education has been accepted by the public since the reform was carried out universally at higher education institutions all over China in 1997). However, as the income from tuition fees is not high, it is only a supplement to the financial strength of the higher education institution. Though the income from financing activity has realized the time value of sediment funds, changing the "dead funds" into "live funds", it is still fairly risky and is an unstable financial source. Based on above aspects, we believe that university's enterprises, scientific research, donation, educational funds and joint educational programme are expected to be the promising sources of fund for the higher education institution.

■ Income from University's Enterprises

University's enterprise, where the university's scientific achievements can be transferred into products, is a channel for the university to raise funds, improve educational conditions and rationally relocate some staff members. The economic and social returns should be taken as the target of the university's enterprise. But at present, the overall economic returns of university's enterprises are not high and can not bring sufficient income to the university. The problems exist in the following aspects:

1. Some enterprises are not strong enough to produce the "fist product" (key product); some have not made thorough study on the market so that their products are in poor sale; and some have adopted the premature technology which can not bring about the economic benefits promptly and still needs further study and investment.
2. The unclear relationship between the university's enterprise and the university on property rights has become a drain on the state-owned assets, and the income turned over to the university can not actually make up for its financial deficit.
3. The redundancy of university's enterprises and their small scale can not bring scale merits into being.
4. Modern enterprise system and total cost accounting have not been adopted thoroughly, which results in the false profit. The preferential taxation policy to the university's enterprise granted by the state has not been implemented appropriately.

To solve the problems above, we believe that:

1. The university's enterprise should be evaluated thoroughly according to its fund operation, degree of maturity of the technology adopted, market prospect of its product. The promising and competitive enterprise should be supported and granted the preferential policy, while enterprises of low efficiency should be closed, stopped, merged or changed so that their resources and assets can be reorganized to form pillar enterprises of scale economy.
2. The university's enterprise should have the priority in accessing scientific achievements of high-tech contents or higher degree of maturity, and transferring them into products so as to create economic and social benefits.
3. Guided by the market, university's enterprises should develop into large- scaled enterprises or groups, and those in good conditions can adopt the stockholding system.
4. Total cost calculation and taxation policy should be implemented conscientiously to increase economic returns.

■ Income from Scientific Research

The university gains its income from scientific research by undertaking basic research programmes and research projects from the government and by engaging in technology development, technology transfer, technical consultancy and services for enterprises. The development of enterprise is in great demand of technology which can be provided by the university; therefore, the relationship of demand and supply between the enterprise and the university ensures the fairly steady fund supply to the university and, at the same time, instills energy into the higher education. So the university must strengthen its connection

with the enterprise in order to develop itself in keen competition. Data shows that only about 18 per cent of scientific achievements has been transferred. If the government can involve itself actively in linking up the university's scientific research forces with the enterprise, providing funds to assist scientific research, the process of technology transfer will be accelerated, which would benefit both the university and the enterprise. Besides the economic benefits it brings to the university, technology transfer plays a significant part in rationally allocating scientific and natural resources, efficiently using facilities and manpower, accelerating the innovation of enterprise and increasing the technical content of the enterprise. In addition, joint scientific research institute, invested by the enterprise and located at the university, can help the enterprise solve the technical problems and create a considerable amount of funds for the education.

■ Educational Funds and Income from Donation

The Education Law stipulates that the state encourages organizations and individuals at home or aboard to offer financial assistance to education. The data shows that the educational donation, received by higher education institutions administered by the State Education Commission, increased 559.27 per cent in the Eighth Five-Year Plan than that in the Seventh Five-Year Plan; thus, further study should be conducted on how to attract more donations. Improving the quality of teaching and strengthening the ability of scientific research not only is the direction of higher education, but also can create nice atmosphere for society and alumni to offer financial assistance to education. Therefore, the higher education institution must:

1. Enhance the international exchange and publicize the strength and brilliant achievement of the higher educational institution so as to attract educational donations.
2. Encourage the enterprise to set up the educational funds and to confer the honorary title to the donator. As for the enterprise, it is a way of building up its reputation and exerting the influence; as for the student, he can enjoy the care and the scholarship offered by the enterprise, cultivating confidence in working at enterprises.
3. Put emphasis on teaching the student how to love his country and his school, so that the student can care for his Alma Mater and support her development even after he graduates.
4. Establish and improve alumni associations, strengthen the connection among alumni, publicize alumni's achievement, and invite outstanding alumni to give lectures so as to create the atmosphere of caring for and contributing to the Alma Mater.
5. Wide scope and large variety should be allowed for the educational donation. Regardless of the form, scholarship, fellowship, or books, equipment and buildings, all are the supports to higher education.

6. Pay attention to the exploit of invisible assets. As for the enterprise, invisible assets mainly refer to the enterprise's commercial reputation, for instance, the present invisible assets of Coca-Cola trademark are estimated to be 73.1 billion US dollars; as for the higher educational institution, the invisible assets are its educational reputation, particularly an immeasurable treasure for key universities. Moreover, it is easier for the higher educational institution with unique style to raise its popularity and to attract the donator. For example, Harvard University, famous for its Business College, received the donation of 356 million US dollars from 1971 to 1985. Therefore, developing invisible assets, a special strategy of market sales, can not be neglected by the higher educational institution either.

■ Income from Joint Educational Programmes

We hold that the joint educational programme can not only be an innovation on teaching system and a way of training enterprise-needed human resources, but also create more channels for the higher education institution to raise funds and to gain support from the government. Currently, joint educational programmes take the following patterns:

1. *Sharing Resources among Universities*

It refers to that teachers can give lectures at other universities freely, and students can select courses among universities. All the teaching facilities, laboratories, books and reference materials, can be shared among each other so as to make full use of resources and compensate mutually. The idea of sharing resources is based on the theory of management accounting which indicates that the fixed cost, through the marginal contribution other than being idle, can be compensated.

2. *Jointly Running School by the University and the Local Government*

It is a recent reform on the system of educational management. The university, through the collaboration with the local government, can receive financial support from the local government to improve the university's teaching and research condition; in return, it can help the local government to train specialists. For instance, School of MBA, Shaanxi Province, with an investment of 5 million RMB from Shaanxi Province, was founded at our university in 1996, and has begun to train the senior management personnel.

3. *Joint Educational Programme between the University and the Enterprise*

Generally speaking, the large-scaled enterprise or the group provide fund to the university which can provide training to staff of enterprises. This kind of new form has great potential, however, the problems such as the entity settlement between resources and assets, and mode of joint management on assets remain to be solved properly. Nevertheless, joint educational programme can benefit both the university and enterprise, explore new channels of raising funds and draw more financial assistance into education.

4. *International Joint Programme of Education*

This is the higher level of the mode of educational programme. Besides attracting funds, it can improve the teaching quality, promote the international academic exchange and raise the university's reputation in the world. Taking a case as an example, Xi'an Jiaotong university has carried out co-operation with Alberta University of Canada in recent years and the faculty exchange from both sides is over 100 person time. Moreover, Sino-Canada Joint Training Ph.D. Centre was set up in Xi'an in 1988. By now, the training programme has been successfully hold for four times with 101 doctoral students from the universities all over China attending, and has achieved remarkable social and economic effects.

The institution of higher education, through the exploration on the joint educational programmes, can transit from closed mode under the planned management to the society-oriented open mode, and actively involve itself in training society-needed human resources. As an efficient way of rejuvenating the state through science and technology, society-oriented joint educational programme has increase the social and economic returns for the university, and at the same time it provides the opportunity for the university and enterprise to fully exert their advantages and open a new way of personnel training.

To sum up, there are a lot of ways of improving educational conditions through raising fund, arousing the public enthusiasm on educational investment and further combining education with economic construction, but the key still lies in making full use of the sources available and continuously exploring the new field. Since the higher education needs to be developed, raising more funds has become a top priority. With more funds and more channels, the management on funds and its usage should be strengthened. In our opinion, the following measures are feasible:

1. The system of general accountant economic responsibility should be established to strengthen the unified leadership on finance and to avoid decentralization of financial power.

2. An Economic Affairs Committee, supervised by the university president, should be set up at the university. The annual budget, final accounts, and stipulation of important economic policy decision and regulation should be thoroughly discussed and approved by this committee.

3. The centralized management on assets should be enhanced to avoid the "outside circulation" and the dispersion of the University's financial resources. Meanwhile, the classified management which can stimulate the initiative of all sides, should be implemented.

4. Setting up the standard orders of accounting and strengthening the basic work on accounting. Besides finishing the regular accounting calculation, computerized accounting which can provide the reliable economic information for decision making should be sped up to enhance the University's ability of self development.

5. Establishing the evaluation system on financial performance and results, through which the efficiency will be increased.

6. Strengthening the function of internal auditing supervision to ensure the healthy development of the university in the market economy.

7. With the rapid development of diversified sources of funds, the university should improve the study on accounting theory so as to meet the demand of all kinds of donators and to comply with the social development and international accounting rules. Therefore, the reform on University's accounting system, which can provide the donators the information on assets, debits, income, cost, distribution, etc., must be enforced to raise more funds.

In brief, the way out for the higher educational institution lies in reform on educational system. While co-ordinating properly the relationship among stability, innovation and development, the financial unit at the higher educational institution should actively involve itself in raising and managing funds to financially guarantee the university to reach the international first-level.

7

Higher Education Reform in Economic Transition: The Case of Shenzhen University

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The Third Plenary Session of the Eleventh CCP Congress, held in 1978, approved Deng Xiaoping's policy of reform and opening out. The next year, Deng Xiaoping decided to set up Shenzhen Special Economic Zone in a small town bordering Hong Kong, taking it as an experiment for his bold economic reforms which were looked on doubtfully by most people then. In August 1980, the National People's Congress formally granted the establishment of economic zones in Shenzhen, Zhuhai and Shantou. These zones would be allowed to implement special policies and take the lead in practicing market economy when the whole country was still operating under planned economy. Shenzhen was the most outstanding among the economic zones. With rapid economic reforms, it has risen to a modern metropolis from a mall town of 30,000 population in the past 17 years. Its domestic production output, national income, gross export and people's living standard rank among the first few cities in the country. The case of Shenzhen has drawn attention from the international community where it is considered as an epitome of future China. Therefore, the study of Shenzhen, its successes and failures will offer useful lessons on the economic, political and cultural reforms in China's economic transition. Similarly, the case study of Shenzhen University will throw light on the opportunities and challenges higher education faces in transitional economies.

■ A Short History of Shenzhen University

Shenzhen Special Economic Zone was formally set up in August 1980 and its establishment signaled the beginning of a new chapter in China's economic reforms. Overnight, the obscure small township came into the national and international spotlight. The barren hills and wild fields turned into a big construction site and various measures of market reform were introduced. The implementation of these measures called for an adequate supply of human resources. Soon it was clear that the shortage of human resources became an important constraining factor in the development of the special economic zone. The local leadership then decided to adopt the policy of both attracting talent from outside and training people who have already settled down. Attracting talent may help to satisfy the imminent shortage and establishment of local training base is oriented to the needs of the future. It was agreed that Shenzhen should have its own tertiary institution to train professionals highly needed locally. As Shenzhen mainly focused on the development of export oriented economy and foreign trade, some people proposed to set up a college of economics. The proposal was soon submitted to Guangdong Higher Education Bureau, the provincial administrative organ in charge of higher education.

In early 80s, Guangdong Province entered into the initial phase of economic take-off. Economy in the Pearl River Delta flourished. However, higher education in Guangdong remained relatively backward, ill suited to the economic development in the region. The Guangdong Government and its education decision-making body were acutely aware that if higher education did not develop with a quickened step, the economic construction and social development in Guangdong would be severely constrained and unable to meet the challenges from the international competition in the 21st century. While remedying the damages of the Cultural Revolution to the higher education, restoring and incorporating a series of tertiary institutions, Guangdong should set about establishing some new universities. Upon learning that Shenzhen planned to set up a college of economics, the provincial higher education bureau sent a senior investigation group, headed by Vice Director Huang Qijiang, to the city.

After a careful study, the provincial investigation group submitted to the Shenzhen government "A Proposal concerning the Founding of Shenzhen University". The document made analysis of Shenzhen's needs for human resources in its future social and economic development. It held that from the long-term perspective Shenzhen should set up a university rather than a college of economics. It put forward a basic framework for setting up a new type university. In Shenzhen, "a new type university should be set up in which two education systems co-exist, integrating multi modes of education and combining long-term programmes and short-term programmes. It should be a multi-disciplinary university." In other words, Shenzhen should explore the development of higher education suited to transitional economy, allowing a new educational system to coexist with the old

one under the planned economy. The proposal also made guiding suggestions on the pattern of education, schooling period and specialties of the upcoming university. It wrote, "The founding of a new type university in Shenzhen is of great significance not only to the construction of the special zone but also to the whole country. The present universities in China are uniform in the pattern of education and schooling periods. They are ill suited to the current development. Therefore it is necessary to found new type universities while implementing necessary reforms in the present universities. With the setting up of this new type university, we may accumulate experience and find out a new path for the management of new type universities. This is of significance to the whole country".

From the perspectives of higher education reform and development in Guangdong and China, the proposal drafted by the Investigation Group made a profound analysis of the present state and historical mission of the special zone and provided ample reasons for the necessity, significance and conditions of founding Shenzhen University. This is a proposal full of foresight and courage. Later on, the development of Shenzhen University followed this basic line.

On 2 January 1983, the Shenzhen Municipal Government submitted The Report about Setting up Shenzhen University. On 26 February the Guangdong People's Government submitted The Application for Setting up Shenzhen University to the State Council. Two months later, the State Council issued its approval of the new university.

It took just half a year from the submission of the proposal by the investigation group to the official approval by the State Council. The short length of the time was a rare case in China. This shows that the founding of Shenzhen University both met the urgent demand for the social and economic development of Shenzhen Economic Zone and followed the major trend of higher education development in Guangdong and China. In early eighties, Guangdong seized the opportunity of the economic take-off to actively develop higher education and set up a series of universities including Shenzhen University, Shantou University and Wuyi University. It was an insightful act. The founding of these universities not only strengthened Guangdong's higher education and exercised a significant influence on the social and economic development of Guangdong, but also promoted the reform and development of higher education in China as these universities, born in the reform era, operated reform-mindedly from the very beginning. Among these tertiary institutions, Shenzhen University's reforms and development have drawn special attention.

In 1979, before the founding of the special economic zone, Shenzhen's revenue had only a dozen million Yuan and the town had to be subsidized by the central government. Its revenue reached 130 million Yuan in 1981 and 170 million Yuan in 1982. Though no longer subsidized by the state, Shenzhen seriously ran short of fund for economic construction. Under such financial difficulties, the special zone government gave priority

to the development of education and culture. In the words of Liang Xiang, the then mayor of Shenzhen, "Nor matter how financially difficult we are, we shall do well in the construction of education and culture." If Shenzhen University was to be set up at this time, many other construction projects had be shelved. Liang Xiang went so as to say, "We will burn our boats and fight to win or die. Even if we have to sell off our own trousers, we will set up Shenzhen University." Thus, it took only seven months to build up a floor space of 200,000 square meters on the campus of Shenzhen University which was a miracle in the history of higher education in China.

In August 1983, the Shenzhen Municipal Government appointed Professor Zhang Wei as the president of Shenzhen University. Zhang was then vice president of Qinghua University, famous expert on engineering mechanics and member of China Academia. The city government also appointed Luo Zhengzi, formerly Vice Party Secretary of Qinghua University, party secretary and vice president of the university. Well-known economists Fang Sheng and Yang Yibai were made vice presidents. On September 27, Shenzhen University formally opened, lifting the curtain on the innovative reforms and development of higher education in Shenzhen.

In the eighties, the whole nation showed concern for the reforms of Shenzhen Special Economic Zone. Its field of higher education also focused its attention on Shenzhen University. Well-known professors came to teach from such key universities such as Qinghua University, Beijing University, People University, Zhongshan University, Wuhan University. Among them were Wang Tan, Tong Shibai, Toang Tongyi, Li Funing, Wang Chuanlun, Gao Mingxuan, Wang Yang, Tang Yijie and Yue Daiyun. Shenzhen University soon established a high-quality staff team.

The five years from 1983 to 1988 witnessed daring reforms in Shenzhen University. Particularly since President Zhang Wei retired and Luo Zhengqi took his place in March 1986, the President Responsibility System was introduced and more drastic reforms were carried out.

In 1989, Shenzhen University was involved in the political incident and President Luo Zhengqi was dismissed.

In August 1989, Guangdong Government appointed Wu Zewei as Party Secretary of Shenzhen University, Wei Youhai as President. The President Division Responsibility System under the leadership of the Party Committee was restored. In 1992, Wei Youhai retired and Cai Delin took over as President. In 1993, Wu Zewei retired and Cai Delin also became Party Secretary. In 1996, Cai Delin retired. Jiang Zhong took over as Party Secretary and Xie Weixin took over as President.

In 1995, Shenzhen University passed the State Education Commission's evaluation directed toward the newly founded universities. In 1996, the State Degree Committee granted Shenzhen University the right to award master degrees. In 1997, new reforms were initiated focusing on XueYuanzhi(dividing the university into a number of autonomous colleges). At present, Shenzhen University boasts 4,800 full time students and 2,600 part time students majoring respectively in liberal arts, natural science, engineering, economics, management, law and teacher education. It also has 150 international students. The university is now at a stage of further development.

■ Efforts towards the Establishment of a Higher Education System in Line with the Market Economy

To adapt itself to the reforms in Shenzhen's economic system and the needs of market economy, Shenzhen University implemented a series of reform measures in its first five years in the quest for a new way of development in transitional economy.

The reform package covered every aspect of the higher education system.

First, a new administrative system was introduced in which "the president administers the school, the party committee administers the party affairs and professors administer teaching affairs". The president's responsibilities included the employment of staff members, evaluation of the abilities and performances of teaching, technical and managerial staff and charge of reforms in logistics work. The party committee was no longer involved in administrative operations. It used spare time to conduct party activities and upheld volunteerism of party work and the policy of letting school executives holding party posts concurrently as well as reforms in political education. Through the establishment of Professors' Committee, University Affairs Committee and Teaching Reform Committee, it was possible for professors to participate in the administrative work and enhance their authority over teaching and academic activities.

Second, specialties and courses were adjusted, the credit system was implemented and teaching methods were initiated with a view to training students to improve their practical abilities.

Third, students were encouraged to "exercise self-reliance, self-discipline and self-empowerment". The Students Self-Disciplinary Committee was founded to let students manage themselves. The work-study programme was put extensively into practice. Tuition was charged, boarding was charged. There was no guarantee of employment after graduation.

All these reform measures drew wide-spread national attention. Dignitaries ranging from the premiere, ministers, governors to well-known scholars and scientists at home and broad came to visit Shenzhen University. National and international media filed reports on Shenzhen University's reforms and development. However, there were deficiencies, imperfections and misunderstandings in the reforms. And Shenzhen University paid its price for them.

Now looking back, we may see that Shenzhen University played a historically leading role in the reforms of China's higher education in the process of its economic transition. It took advantage of Shenzhen's special position and took the lead among the domestic universities in reforms and opening out. It was the first in the country to introduce the following reform measures:

1. The change of college graduate assignment system which means that the state no longer guarantees employment to college graduates. The University functions as a kind of recommendator. The employers and the graduates have a free option to select each other.
2. The change of free education to fee paying education. Now college students have to pay for their education.
3. The promotion of an extensive work-study programme to raise students' ability of self-reliance, self-discipline and self-empowerment as well as their adaptive ability to society.
4. The change of grant-in-aid into scholarships.
5. The change of rigid academic year system to credit system which has helped to enable the instruction to suit the students' level and provided a favorable environment for the cultivation of talent.
6. The founding of a work-study college(now changed into the Adult Education College) which broke the boundary between full-time and part-time higher education, making it possible for maximum use of educational resources.
7. The removal of the Iron Bowl personnel system and introduction of a competitive system. All staff are employed on a contract basis.
8. The separation of academic titles and employment. An ability system was introduced to the school to supplement the national academic position evaluation system.
9. The introduction of computer network in the administrative management. The administrative body was streamlined to improve management efficiency.
10. The removal of the university's direct responsibilities for staff logistics. The logistics departments began to operate on a contract basis, which helped to improve both the service and efficiency.

11. The founding of school enterprises. These enterprises achieved good economic results and provided economic support for the development of the university and the improvement of staff's living standards as well as a base for the integration of academic research into production.

We cannot say that all of Shenzhen University's reforms were successful. On its road to reforms, there have been setbacks and failures. However, its direction has proved to be right and its accomplishments are many. Both its successes and failures become valuable assets to the reform and development of China's higher education. With the exchanges among domestic universities and the advertising of the media, Shenzhen University's reform measures soon spread to colleges and universities all over China. After further revisions, many of its reform measures in graduates' assignment, credit system, employment contract system, logistics service were adopted nationwide. Some of them have been written into "The Outline of Reform and Development in China's Higher Education".

The focus of Shenzhen University's reforms was to explore a new road to adapt China's higher education to the needs of its socialist market economy. This has been the basic line and accomplishment of the University's fourteen years of reforms and development. Shenzhen University has paid its price, but the price is worthwhile. Comparatively speaking, fourteen years is still a short time and one cannot expect a university of such a short history to be perfect and free from shortcomings. Looking at today's Shenzhen University, we are proud to say that it is one of the best universities founded since China began its reforms.

■ Five Points for Reference

Since 1978, under the guidance of Deng Xiaoping Theory, China has gradually embarked on the road of prosperity. The core of Deng's theory is that China remains at the initial stage of socialism, it must develop productivity and market economy. On one hand, the country will implement the reform and opening policy and learn all those useful things from capitalism. On the other hand, it will adhere to the Communist Party's leadership and take the socialist road. In the field of higher education, China will learn draw on the developed countries' experience in managing and developing higher education. Meanwhile, it has to adjust the development of higher education to the actual circumstances of the country and keep its own characteristics. Here are some points for reference.

1. Proper handling of relationships between tertiary institutions, the government and society. China has long implemented centralization. Under several decades of planned economy, a highly centralized higher education management system was firmly put in place. The introduction of market economy has broken the economic centralization.

But educational centralization has not fundamentally changed., Under such a centralized system, the state makes plans, the government administers directly and tertiary institutions lack autonomy and remain inactive to the societal needs. Though founded with local fund, Shenzhen University is still largely confined by the state's higher education policies. In specific administrative matters, it is very much under the control of the Shenzhen Municipal Government. Local tertiary institutions founded together with Shenzhen University have the same problem of too much interference from local governments. To change the situation, both the governments and the universities bear responsibilities. The local governments should change its function and turn direct management into macro-control. It should exercise control by means of legislation, planning, fund transfer supervision. It may set up organizations like Japan's Central Education Evaluation Committee and Hong Kong's University Grants Committee to serve as intermediaries between government and universities. As regards universities, management of education should be in line with relevant legislation, planning and goals. They should work actively to provide talent and intellectual and scientific support to the local community like the United States' Wisconsin University.

2. Gradual autonomy to universities. The enlargement of autonomy is a popular debate issue in higher education reforms. Shenzhen University attempted to make a breakthrough in this respect. It was once given many autonomous rights, but most of these rights have been retrieved, making the university's further development severely restricted. Autonomous rights for universities should cover those concerning decision making, enrolment, establishment of specialties and administrative bodies, personnel employment, academic position granting, accumulation of funds and their use and international exchanges. The enlargement of autonomous rights has to be a gradual process as it cannot transcend historical and social conditions. However, the government should seriously consider the issue and quicken the reform pace. Tertiary institutions should set up a self-control mechanism to make proper use of these rights.

3. Reforms in political education. Political education in this country's universities has "Chinese characteristics". In the process of economic transition, western ideas have been introduced to China and cultural pluralism has emerged. The traditional methods, approach and content of political education are ill suited and require for reforms. However, reforms must conform to the actual circumstances of the country. On one hand, good political and moral education will equip the new generations with correct values, correct political outlook and moral outlook and prevent them from degenerating into economic animals. On the other hand, under its actual circumstances, China will adhere to Communist Party leadership and take the socialist road. It opposes the use of western political values to educate the young. Any attempt of such use will result in non-worthwhile losses.

4. Broadening fund sources. Shortage of fund is an important constraining factor in the development of higher education. In the past, the Chinese government took financial charge of all its universities. It was the case of a poor country running a large-scale education and severe shortage of education fund resulted. Since the country's economic reforms, the situation has improved somewhat. Private tertiary institutions have emerged but they are very few in number. The development of higher education is government behavior. The government investment is therefore the main source of fund. However, enterprises, collectives and individuals should be encouraged to run higher education, making university's ownership pluralistic. The government should provide some financial support to private tertiary institutions and allow the state universities and colleges to attract fund through various sources. In addition to government's proportionate investment through legislation, universities and colleges should be permitted to charge reasonable tuition, get fund in cooperation with enterprises and receive private donations and accumulate fund through its own enterprises. Shenzhen University is located in an economically advanced region. In the past 14 yearns, the government has invested 150 million Yuan in capital construction, over 50 million in equipment and books and 600 million in daily expenses. In comparison with other universities on the mainland, the investment is high. However, because of single source of investment, the University still has shortage of fund particularly in equipment and books. Other universities in Guangdong such as Shantou University and Wuyi University have relatively ample fund because of multi sources of investment (mainly through donations by Hong Kong and Macau businessmen.

5. Proper handling of the relationships between the applied and theoretical sciences in education. In the process of economic transition, a short-sighted education outlook once prevailed. At some time, all the Chinese universities were training the applied-type students and conducting research on applied sciences. The applied-type people and applied sciences are indispensable to the economic construction. However, universities are places to cultivate high-level talent and pursue profound learning. Tertiary institutions should have different types such as research universities, polytechnics and community colleges. Not all tertiary institutions should conduct applied research. Shenzhen first planned to set up an applied college of economics. It was with foresight that the Guangdong Higher Education Bureau suggested that a university be set up instead. However, in its early days, Shenzhen University greatly promoted the development of applied specialties and ignored the basic science specialties, resulting in the students' lack of good foundation of basic sciences and thus weakening their competitiveness in the society. Shenzhen is now growing at a spectacular speed and has become a city of 4 million population. With its economic growth, it will speed up the development of high-tech industries and move towards an international modern metropolis. All this calls for a greater development of higher

education and improvement of higher education levels. Shenzhen badly needs a comprehensive higher education structure which includes both applied polytechnics and a research university. Currently, Shenzhen University has quickened its development of specialties and is oriented towards becoming a research university. This is a historical mission entrusted to Shenzhen University at the stage of economic transition.

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Annexes

Annex I

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Annex II

PROVISIONAL SCHEDULE OF WORK

Tuesday, 7 October 1997

08:30 - 10:00	North-West University Tour
10:30 - 12:00	Xi'an Jiaotong University Tour
12:30 - 14:00	Lunch
14:20 - 18:00	Excursion to the Terra-Cotta Warriors and Horses of Qin Dynasty

Wednesday, 8 October 1997

08:30 - 09:00	Registration
09:00 - 10:00	Opening
	Speakers:
	Vice-President of the Provincial People's Congress
	Assistant Minister of the State Education Commission and Secretary General of the Chinese NATCOM for UNESCO UNESCO PROAP
	Director General of the Provincial Education Commission
	Photograph
10:00 - 10:30	Coffee
10:30 - 10:40	Election of Chair, two Vice-Chairs and Rapporteur Introduction of the Working Methodology of the Workshop

10:40 - 11:20	**Keynote Address** Challenges and Strategies for Chinese Universities in the Transition from Planned Economy to Socialist Market Economy in the Information Age by Dr. Min Weifang, Executive Vice-President of Beijing University
11:20 - 12:00	Country Report (20 minutes each, 15 minutes presentation and 5 minutes questions and answers) Cambodia China
12:00 - 13:30	Lunch
13:30 - 15:40	Country Report (cont'd) Kyrgyzstan Lao PDR Mongolia Myanmar Russia Viet Nam
15:40 - 16:00	Coffee
16:00 - 17:00	Theme Paper No. 1 ***Issues in Evolution of Overall Operational Mechanism of Higher Education in the Transition from Centralized to Market Economies*** by Prof. Wang Yibing, Programme Specialist in Higher Education, UNESCO PROAP
20:00	Tang Songs and Performance

Thursday, 9 October 1997

08:30 - 10:00	Theme Paper No. 2 ***Features on Market Economies and Models of Higher Education - Case of ASEAN Countries*** by Dr. Tong-In Wongsothorn, Deputy Permanent Secretary, Ministry of University Affairs, Thailand and Acting Director, SEAMEO RIHED Theme Paper No. 3 ***Market Economy and Higher Education Development – Case of Malaysia*** by Prof. Dr. Anuwar Ali, Director, Higher Education Department, Ministry of Malaysia
10:00 - 10:30	Coffee
10:30 - 12:00	Cont'd Theme Paper No. 4 ***The Evolution of Economic Systems and the Development of Higher Education: Case of South Asia*** by Dr. Jandhyala B.G. Tilak, Senior Fellow and Head of the Educational Finance Unit, National Institute of Educational Planning and Administration, New Delhi, India Theme Paper No. 5 ***Challenges Facing University Management in Transition Toward the Socialist Market Economy: Case of North-West University*** by Mr. Wang Chinned, Vice President, North-West University
12:00 - 13:30	Lunch
13:30 - 15:00	Cont'd

	Theme Paper No. 6
	Challenges Facing University Finance in Transition toward the Socialist Market Economy: Case of Xi'an Jiatong University
	by Senior Chartered Accountant
15:00 - 15:30	Coffee
	Theme Paper No. 7
	Higher Education in the China Special Economic zone: Case of Shenzhen University
	by Dr Yang Yiyi, Director, Higher Education Research Institute, Shenzhen University, Shenzhen, Guangdong Province, PRC
	Theme Paper No. 8
	Internationalization of Higher Education in Transition Economies and the Role of UNESCO and International Agencies
	by Prof Wang Yibing

Friday, 10 October 1997

09:00 - 10:00	Formulation of Recommendations and UNITWIN Network for Higher Education Reform Transition Economies in Asia and the Pacific, and Second Workshop: Theme, Venue and Date
10:00 - 10:30	Coffee
10:30 - 12:00	Adoption of Report and Closing
12:00 - 13:30	Closing Lunch
11:00 - 17:00	Campus Tour